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ABSTRACT

This booklet presents the results of an exploratory study of educational indicators that differentiate more effective from less effective primary schools. The studies examined in the booklet encompassed 26 national systems of education. The booklet considers the community context of the school; school management; school size, type, and staffing levels; school reading resources; school special reading programs and initiatives; classroom libraries and materials; kinds of reading teachers; teacher activities and teaching methods; and out-of-school activities. Chapters in the booklet are: (1) The Concept of More Effective and Less Effective Schools; (2) A Brief Description of the Reading Literacy Study; (3) The Selection of Indicators for Further Study; (4) Indicators Discriminating between More Effective and Less Effective Schools; (5) A Portrait of a More Effective School. Four appendixes comprising almost half the document include: (1) Reliability Coefficients; (2) A List of Constructs Formed, (3) Procedures for the Identification of More Effective and Less Effective Schools; and (4) More Effective and Less Effective Schools within Countries. (RS)

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T. NEVILLE POSTLETHWAITE · KENNETH N. ROSS

Effective schools in reading

Implications for educational planners

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The International Association for the Evaluation of Educational Achievement

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EFFECTIVE SCHOOLS IN READING: IMPLICATIONS FOR EDUCATIONAL PLANNERS

AN EXPLORATORY STUDY

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The International Association
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November 1992

PREFACE

In all countries of the world, societies vary in terms of the degree of equality among their communities and among their schools. Some communities are relatively affluent and others are relatively poor. Some communities have parents who care more for their children's education than others. Some schools are well equipped and others less well equipped. Some have active school principals who take many initiatives with their staff to improve the academic, social, and affective development of their students. Others have school principals who are less active and take fewer initiatives. Some schools have teachers who work hard while others have teachers who "get by".

In extreme cases there are some schools that are located in affluent communities with children whose parents do everything possible to help their children's learning, and other schools located in poor communities where the parents believe that their children's learning is the school's concern and not theirs. It is well known that children in the first set of schools generally achieve at a higher level than children in the second set of schools.

And yet, there are exceptions. There are some schools that serve poor communities which perform well above a level that might be expected given their circumstances, and there are some schools that serve affluent communities which perform well below a level that one would expect given their circumstances. The "above expectation" schools are often referred to as "more effective" schools and the "below expectation" schools as "less effective" schools.

The question then becomes: "Which factors distinguish more effective from less effective schools?" This booklet reports one approach undertaken to attempt to answer this question by using data concerning the reading literacy achievement of students attending primary schools in twenty-six countries. The study was conducted by the International Association for the Evaluation of Educational Achievement (IEA) in the period 1989 - 1992. The data were collected in late 1990 and early 1991. This booklet reports on how the more effective and less effective schools were identified in each of the twenty-six countries and the educational indicators that were found to distinguish the two groups of schools. The main aim of this exercise was to offer hints to educational policymakers and planners about aspects of the educational environment that were worthy of further study.

The countries involved in the study vary widely in their national wealth and cultural traditions, and it was therefore not surprising that some of the indicators that distinguished the two groups of schools were different in different countries. It is also important to recognize the methodological issue that where there was no difference in particular educational practices within a country (e.g., type

and length of teacher training), then no differences would be found between the two groups of schools.

A research study of this magnitude is a cooperative venture. The National Research Coordinators (NRCs) from the participating countries worked collectively on the research design and instrumentation for the study. A "common" reading literacy test was used and this, along with all other instruments used in the study, was translated by the NRCs in their own countries. Without their commitment and cooperation no meaningful comparative data would ever have been produced.

The funding for all of the national work was provided by governments and/or agencies within each country. The funding for the international work was provided by the MacArthur Foundation, the Mellon Foundation, the U.S. National Academy of Sciences, the European Community, Unesco, and by many of the countries participating in the study. Accommodation for the International Coordinating Center was provided by the University of Hamburg's Institute of Comparative Education. Our thanks go to all of these sponsors for their generous support.

Andreas Schleicher at the International Coordinating Center was the International Coordinator and Data Processing Manager for the study. The data processing team at Hamburg created the computer-stored working files. Dirk Hastedt (with the help of Ingvar Lundberg of the University of Umeå in Sweden) formed the construct "indicators" that were used in most of the analyses. A special debt of thanks goes to Stefan Seyfert who was responsible for preparing the analyses reported in this booklet. The preparation of the booklet for publication was undertaken by Jedidiah Harris who was ably assisted by Julianne Friedrich, Britta Niemann, Bettina Westphalen, and Ellen Ziesmann.

The interpretations of the results from a complex study like this are necessarily contentious. The authors recognize that, in the last resort, all interpretations are influenced by memory, introspection, and testimony – and that these three elements may differ from one person to another. However, while prudence is called for in interpretation of all data analyses, this should not inhibit genuine intent to search for valuable patterns in the data.

Neville Postlethwaite, Hamburg, Germany
Ken Ross, Paris, France

September 1992

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CHAPTER ONE

THE CONCEPT OF MORE EFFECTIVE AND LESS EFFECTIVE SCHOOLS

In all school systems of the world, some schools are considered to be "better" than others. In fact, parents often go to great lengths to have their children enrolled in one school rather than another based on such judgments. The indicator that is usually accepted as a yardstick for making these kinds of judgments is student achievement – usually as measured by success rates in examinations. Among the staff of some ministries of education, opinions about schools are often refined further to indicate that school A is better than school B in a particular subject area such as mathematics or music. Whatever the focus for these kinds of comparative statements, there remains the fact that *schools do vary* in terms of average student achievement.

Given that schools vary, the question arises as to why it is that some schools have high average student achievement and some have low average student achievement. Four quite different reasons are often advanced as explanations.

The first reason is that some schools are located in privileged areas in the sense that students in the school come from homes where parents care about their children's education, ensure that their children are well fed, try to help their children to learn to read as soon as possible, show interest in school work, provide ready access to books in the home, and so on. On the other hand, there are schools which serve communities that are less privileged and have a larger proportion of students in them who come from homes that do not have the above characteristics. It would be expected that the achievement of students attending the first type of school would generally be higher than that of students attending the second type because of the supplementary home resources (financial, cultural, attitudinal, political) that are available to them.

A second reason is that schools that have high achievement are better equipped than schools with low achievement. These schools have ample space, places to sit and write for every student in the classroom, textbooks for every student, plenty of reading materials (both in classroom libraries and school libraries), small class sizes, and appropriately designed classrooms.

The third reason put forward is that schools with high average scores have good teachers. That is, they have teachers who know their subject matter, demand a lot from their students, know how to structure the material to be learned, keep good order in the classroom, get feedback systematically from the students on which types of objectives the students have mastered, and give help to those who are having problems mastering some objectives. It is also often claimed that these good teachers will have a superior grasp of an education system's aims and a better knowledge of which teaching strategies are most likely to address these aims.

Finally, a fourth reason is that schools with high average scores are those that are well managed. These schools have principals who help the teachers by showing enthusiastic and creative leadership in terms of school pedagogy and educational and social climate.

There are various "movements" within the educational world that would tend to support one or more of these four reasons as the key to explaining variation among schools in terms of average student achievement. However, as with many social processes, the most likely answer is that the explanation lies in some kind of complex combination of all four reasons.

What is an Effective School?

Sometimes people talk about a school whose students are "doing a little better than expected". What they usually mean by this is that the average student achievement for the school is rather higher than one would expect – given a knowledge of the home circumstances of the students attending the school.

It is possible to re-express this kind of observation about a school by using a "mixture" of the four reasons presented above. For example, one might say that such a school was disadvantaged in terms of the first reason given above – but that the school more than overcame this disadvantage through a combination of influences that were associated with the second, third, and fourth reasons. That is, one might say that the school overcame the adverse educational influences normally linked with student socioeconomic disadvantage through an "effective" deployment of school facilities, teaching and learning strategies, and leadership.

Dyer (1970), in a paper that followed in the wake of the Coleman report (Coleman et al. 1966), provided one of the earliest operationalizations of this interpretation of an "effective school". He proposed that a School Effectiveness Index (SEI) should be constructed as a score based on the difference between the school's actual average achievement score and the score that would be predicted from a knowledge of student characteristics and "hard to change" conditions surrounding the school.

Dyer's concept of an effective school was innovative for its time (Some would probably still find it a radical notion – even though there are now journals and international conferences devoted solely to the topic.). However, the point at issue is not so much Dyer's proposition that effective schools should be identified through an assessment of what they "add" to the performance of their students, but rather how indices like the SEI should be calculated, and whether they are sufficiently stable to warrant confidence in their use over time (Raudenbush and Bryk 1986, Goldstein 1987, Teddlie et al. 1989).

While there are differences of opinion about which indices should be employed and how these should be calculated, there is general agreement that the extremes of the distribution of more effective to less effective schools can

be used to "screen" for indicators that distinguish more effective schools from less effective schools. In other words, when comparing schools that "add" something to the performance of their students with schools that do not, it is safer to look at the extremes of a distribution of school effectiveness. Such an approach offers some protection against the likelihood of imputing too much meaning to index scores for particular schools.

Throughout this report the term *schools* has been used instead of *classes*. This is not exactly congruent with the sample design procedures for the study in which intact classes were drawn as the final stage of sampling. However, since many of the indicators in the study fell outside the direct ambit of the classroom (e.g., those describing the principal, the school, the community, etc.) it was decided that the term *school* was more appropriate. There is no suggestion, however, that all classes and teachers in a school are equivalent in their impact on their students' learning.

The Main Questions Addressed by this Report

This report has been prepared for use by educational planners who are seeking to identify areas of policy that fall within their realm of decision-making and that are likely to have an impact on the ability of schools to improve the reading performance of students. That is, the report seeks to identify some of the indicators concerning schools and their operation that an educational planner might address in order to transform less effective schools into more effective schools.

In specific terms, the report was guided by the intention to address the following four questions in a manner which would suggest realistic options for policy.

a) Which indicators are *most important* for differentiating between more effective and less effective schools?
b) Which of the most important indicators are *malleable* – in the sense that they are amenable to changes through the use of government policy?
c) Which of the most important and malleable indicators afford *feasible* policymaking opportunities in the sense that they do not presume access to unrealistic funding levels?
d) Are the important, malleable, and feasible indicators *country specific*, or are there *consistent patterns across countries*?

It must be emphasized that this booklet presents the results of an exploratory investigation of the data. That is, it represents a descriptive account of "a first slice through the data" that seeks to suggest fruitful lines of inquiry that will surely be pursued through secondary analyses by other researchers with more time at their disposal.

Which Indicators?

In an ideal situation, the selection of the indicators to differentiate between more effective and less effective schools would range across the full spectrum of influences on educational outcomes. Ross and Mählck (1990) summarize such a situation in the following manner.

> Planning the quality of education through informed decision-making requires the availability of accurate and timely information that links together resource inputs to education, teaching-learning conditions and processes, and appropriate indicators of the knowledge, skills, and values acquired by the students. (p. 3)

The indicators selected for study in this report represented a subset of the possibilities that would be imaginable within the Ross and Mählck ideal. In particular, the indicators were selected for their potential in providing useful information for educational planners – and therefore no indicators describing students' homes were employed other than in the initial phase where groups of more effective and less effective schools were identified.

Further, while a considerable number of indicators describing the "teaching-learning conditions" of schools were examined, it was not possible to include a comprehensive assessment of indicators of "teaching processes" because the data collection on which the report was based did not include systematic classroom observation information.

Ross and Mählck suggested a comprehensive coverage of student outcomes in terms of knowledge, skills, and values. In this report a single student outcome measure of reading literacy was employed. It is important to bear this in mind because other kinds of outcome measures may have resulted in different groups of schools being identified as more effective or less effective. For example, some schools may be more effective in terms of reading outcomes but less effective in terms of musical performance outcomes. Nevertheless, the reading outcome seemed a sound choice for this report because of its central role in the whole educational process.

CHAPTER TWO

A BRIEF DESCRIPTION OF THE READING LITERACY STUDY

In the period 1989 to 1992, the International Association for the Evaluation of Educational Achievement (IEA) conducted a Study of Reading Literacy in 32 systems of education. The study focused on two levels in each of these systems: the grade level where most 9-year-olds were to be found and the grade level where most 14-year-olds were to be found. Teacher and school effects were thought to be of most interest at the 9-year-old level – a period when the basic learning of reading is still in progress. Thus, this booklet considers only the grade level where most 9-year-olds are to be found; nothing will be reported about the 14-year-old population.

This chapter presents a brief overview of the target populations and sampling, the reading literacy tests, and the background data collected by means of questionnaires from students, their teachers, and their school principals. Readers interested in the technical details of what is presented in this brief overview of the study are referred to the Technical Report of the study (Beaton 1992).

Participating Systems of Education, Target Populations, and Sampling

The systems of education participating in the study, the grade level tested, the age of entry into the school systems, and the mean age of the students in the grades tested are presented in Table 2.1. A short comment is also provided in this table in order to indicate any special features of the defined target population of students.

In all countries, pupils in separate special education schools were not included in the defined population. That is, the schools involved in the study were those that operated within the mainstream education system in each country.

The defined target population was concerned with the grade level in which most 9-year-olds were located and, as was to be expected, the percentage of 9-year-olds in the selected grade level varied from around 50 percent to around 99 percent across countries. The variation in this percentage was often associated with variations in the age level for starting school and, in two countries, it was due to a deliberate decision to test either the grade above (Indonesia) or the grade below (Canada (BC) the one that fitted the description of the defined target population. To illustrate, Canada (BC) deliberately tested one year below the 9-year-old grade because of local research requirements, and Indonesia tested one grade higher, because it is in Grade 3 that the transition is made from instruction in the local language to instruction in the national language that was used in the

Table 2.1. List of participating mainstream education systems, age of school entry, grade and mean age tested, and comments

Country	Grade tested	Age of entry	Mean age	Comments
Belgium/Fr	4	6	9.8	All French-speaking state schools
Canada/BC	3	6	8.9	All schools
Denmark	3	7	9.7	All Danish-speaking schools
Finland	3	7	9.7	All Finnish-speaking schools
France	4	6	10.1	All state schools. Note that 16 percent of pupils are in private schools
Germany/E	3	6	9.4	All state schools
Germany/W	3	6	9.4	All schools
Greece	4	6	9.3	All schools
Hong Kong	4	6	10.0	All Chinese-speaking schools
Hungary	3	6	9.3	All schools except for very small schools in remote areas.
Iceland	4	7	9.8	All schools except for schools with fewer than 5 students
Indonesia	4	7	10.8	All schools in 7 provinces where 75 percent of the population lives
Ireland	3	5	9.3	All schools except for schools with fewer than 5 students
Italy	4	6	9.9	All state schools
Netherlands	3	4 (6)*	9.2	All schools
New Zealand	5	5	10.0	All schools
Norway	3	7	9.8	All schools
Portugal	4	6	10.4	All schools
Singapore	3	6†	9.3	All state schools
Slovenia	3	7	9.7	All schools
Spain	4	6	10.0	All Spanish-speaking schools except for schools with fewer than 10 pupils in target population
Sweden	3	7	9.8	All schools
Switzerland	3	6 or 7	9.7	All schools
Trinidad/ Tobago	4	5	9.6	All schools
United States	4	6	10.0	All schools
Venezuela	4	6	10.7	All schools except rural private schools (0.2%)

* Compulsory school entry at 4, but formal instruction in reading begins at 6

† Not compulsory

reading tests. Finally, some systems of education did not know the age/grade distribution in their system because no official information was available. Hence they made an "educated guess" that was normally based on a small survey of schools. (Such are the realities of international studies!) Fortunately, even with these somewhat different approaches to the specification of the appropriate grade level, most of the mean ages were within the range of 9.2 to 10.0. One system was below this range and four above it.

The defined target populations in each country, that is, all pupils in the grade where most 9-year-olds were to be found in the first week of the eighth month of the school year, were sampled such that each student had a known probability of entering the sample.

The numbers of students, teachers, and schools in the sample in each country are presented in Table 2.2. It is clear that, for example, Spain tested about five times as many schools and students as Finland. This does not mean that the Spanish sample was "better" than the Finnish sample because all samples were drawn to reach the same pre-specified minimal level of sampling accuracy.

Table 2.2. Number of schools, teachers, and students participating in the study

Country	Schools	Teachers	Students
Belgium/French	149	152	2708
Canada/BC	157	161	2731
Denmark	164	209	3543
Finland	71	71	1552
France	136	136	1865
Germany/East	100	101	1983
Germany/West	150	150	3106
Greece	175	175	3609
Hong Kong	167	167	3313
Hungary	144	144	3010
Iceland	180	283	4035
Indonesia	174	174	3169
Ireland	122	122	2714
Italy	154	154	2242
Netherlands	91	99	1706
New Zealand	176	176	3027
Norway	191	191	2487
Portugal	145	167	2808
Singapore	206	206	7399
Slovenia	140	140	3300
Spain	324	324	8230
Sweden	123	234	4347
Switzerland	225	227	3435
Trinidad/Tobago	182	248	3684
United States	165	300	6729
Venezuela	161	162	4716

Main Data Collection

The main data collection took place in the period from October 1990 to April 1991 as close as possible to the eighth month of the school year. Countries that finished the school year in December tested in September or early October 1990. Those whose school year finished in the period May to July tested in the period February to April 1991.

The data were entered into computer files using specialized data entry software produced by the International Coordinating Center (ICC). This software included a series of rules that checked for wild and illogical code values. When the data files from each country arrived at the ICC they were "cleaned". That is, the data were subjected to more sophisticated checks than had been the case during the data entry phase. These checks were mainly concerned with logical cross-checks across variables and further range value checks for open-ended questions. Inconsistent values were corrected where possible or removed from the data set. Once the data had been cleaned, the files were merged and sampling weights were calculated. These data preparation procedures involved an enormous amount of work and data processing time – but they were essential in order to ensure that the data were of high quality before the data analyses commenced. Most of the national data sets arrived by the end of July 1991 and all data files were in order by February 1992. Work then began on the production of various reading literacy scores and on indicators from the background questionnaires.

The Reading Literacy Tests

For the purposes of this study, reading literacy was defined as:

...the ability to understand and use those written language forms required by society and/or valued by the individual.

Three domains of reading were identified for testing.

Narrative prose: Continuous texts in which the writer's aim was to tell a story – whether fact or fiction. These normally followed a linear time sequence and were usually intended to entertain or involve the reader emotionally. The selected extracts ranged from short fables to lengthy stories of more than 1,000 words.

Expository prose: Continuous texts designed to describe, explain, or otherwise convey factual information or opinion to the reader. The texts contained, for example, brief family letters and descriptions of animals as well as lengthy treatises on smoking and lasers.

Documents: Structured information displays presented in the form of charts, tables, maps, graphs, lists, or sets of instructions. These materials were

organized in such a way that students had to search, locate and process selected facts rather than read every word of continuous text. In some cases, students were required to follow detailed instructions in responding to such documents.

The construction of the tests is described in Beaton (1992). As seen above, there were three domain scores for each student. The average within-country correlations among the student scores (after correction for attenuation) on the three domains were:

Narrative and Expository:	0.81 to 0.97
Narrative and Documents:	0.77 to 0.91
Expository and Documents:	0.69 to 0.91

The reliabilities (KR-21) of the tests are presented in Appendix A for the interested reader. For the purposes of this booklet a decision was taken to use a composite reading score.

Student, Teacher and School Principal Questionnaires

Three questionnaires were constructed: a Student Questionnaire, a Teacher Questionnaire, and a School Questionnaire. The National Research Coordinators (NRCs), representing the participating systems of education, worked cooperatively to identify those indicators that were perceived, either from experience or on the basis of previous research, to be important for explaining differences among pupils, among schools within countries, or among systems of education.

Once the indicators had been identified, decisions were made on how many questions were needed to measure each indicator. This exercise resulted in a series of questions being written for students, teachers, or school principals to answer. An accompanying document was produced for each questionnaire indicating the intent of the question and the international code to be used. Guidelines for translation were given. Each question had to be translated from the international version to the language in which the questionnaires were to be administered. Each question could be worded in the way it would be understood within a system – but in such a way that it would yield valid information which could be coded according to the international coding rules.

The questionnaires were pilot tested on judgment samples of schools in all countries, and descriptive statistics were produced for each question. The NRCs also submitted comments on problems encountered in translation, problems experienced by pupils when answering the questionnaires, and errors made in translation. As a result of this pilot testing, many improvements were made in the phrasing of questions and the overall structure of the questionnaires.

Indicators: Singletons and Derived Variables

In all there were some 500 separate questions on the questionnaires. In some cases, one question (e.g., sex of teacher) was used as an indicator. This type of indicator was known as a singleton. In other cases two variables were used to form an indicator; for example the total enrollment of the school divided by the number of full-time teachers forms a ratio indicator known as the student-teacher ratio. In yet other cases, a number of questions were combined to estimate the extent to which a teacher emphasized 'comprehension instruction' in teaching reading.

Some examples of these indicators are given below.

Singleton indicators

In all, there were about 500 variables. Examples of single variables that were not used in the formation of derived variables were:

Student:	age, sex, time spent on reading homework, frequency of borrowing books from a library, number of books in the home.
Teacher:	sex, number of years teaching this class, total years teaching experience, number of years pre-service education, number of pupils in the class, whether there was a classroom library or not, the number of books in the classroom library, the frequency of visits to the school library, etc.
School Principal:	whether the school had any special reading programs and, if so, the types of reading programs, whether the school was a state or private school, the frequency with which the school principal undertook particular activities, the extent to which the school principal perceived the parents of the children in the school as supporting the principles and objectives of the school.

Derived: Ratio indicators

Teacher:	number of classroom library books per student (by dividing the number of students in the school by the number of full-time (and full-time equivalent) teachers in the school). Hours per year instruction (by multiplying the number of weeks per year the school was open by the number of hours instruction per week offered by the school).
School Principal:	student-teacher ratio (by dividing the number of students in the school by the number of full-time (and full-time equivalent) teachers in the school. Hours per year instruction (by multiplying the number of weeks per year the school was

open by the number of hours instruction per week offered by the school).

Derived: Composite variable indicators

Teacher: Assessment of lower order skills. In this case the teacher responses to four questions about assessment of a) word recognition; b) decoding; c) vocabulary; and d) sentence understanding were subjected to a principal components analysis and factor scores were produced for each country but based on the international loadings.

Figure 2.1 presents an example of how these three different kinds of variables were formed and used.

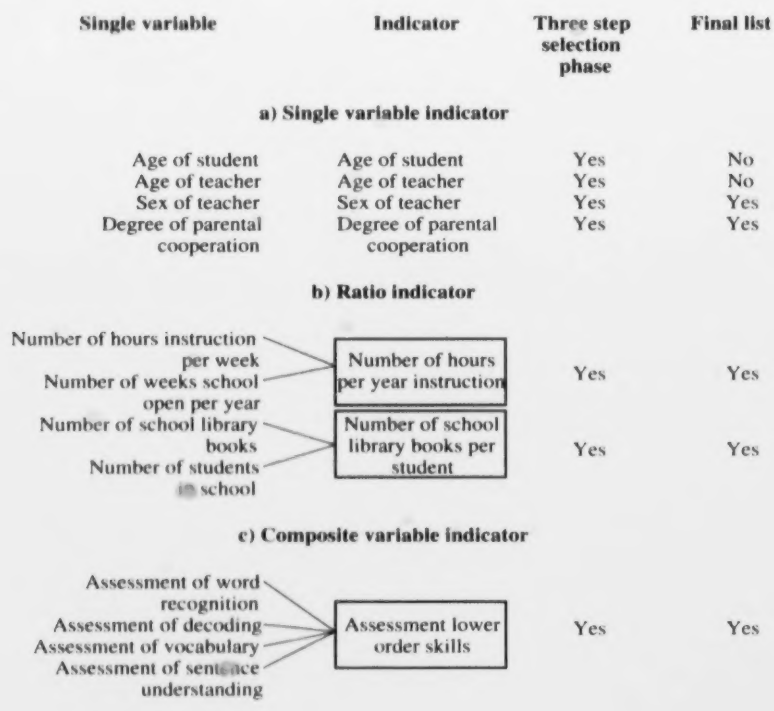

Figure 2.1. Formation and use of single variable, ratio, and composite variable indicators

Since the composite variable indicators were a major part of the study, a brief description of them is given below. The actual variables in each composite indicator are given in Appendix B.

1. *Home Literacy Interaction*: The extent to which students read to others at home, were read to, or discussed what was read.
2. *Read Aloud*: The extent to which the students read newspapers, comics, etc., aloud at home (It should be noted that reading aloud was not part of the culture in some countries.).
3. *Voluntary Reading*: The extent to which the students read books, comics, magazines, etc., for fun outside school.
4. *Reading in Class*: The extent to which the students read books, work books, exercises and looked up information in class.
5. *Comprehension Instruction*: The extent to which students in class were involved in activities designed to encourage thinking about the meaning of what they were reading.
6. *Active Teaching of Comprehension*. The extent to which the teacher emphasized the learning of new vocabulary, explained the background to stories, encouraged students to compare stories, and assessed vocabulary and comprehension.
7. *Comprehension Through Graded Materials*: The view that the teacher took about accurate reading, sequenced materials, and the necessity for children to understand what they read.
8. *High Demand and Structure*: The extent to which the teacher believed that the pupils should be assessed, their reading aloud corrected immediately, vocabulary taught (from word lists), and materials structured (this indicator was meant to represent "traditional" teaching).
9. *Phonics Teaching*: The extent to which the students in class were involved in learning sound-symbol relationships and word attack skills.
10. *Encouragement to Read*: The extent to which teachers encouraged their students to read more and to use the library.
11. *Taking Student Interest into Account*: The extent to which the teacher used knowledge of student interests gained from records and informal observation and interviews.
12. *General Emphasis on Assessment*: The extent to which the teacher used exercises and tests in workbooks and textbooks, multiple-choice and open-ended questions.
13. *Assessment of Lower Order Skills*: The extent to which the teacher assessed word recognition, decoding, vocabulary and sentence understanding.
14. *Teacher Readership (Expository)*: The extent to which the teacher read books on history, the arts, and science.

15. *Teacher Readership (Literature)*: The extent to which the teacher read novels, poems, plays and books for children.
16. *Teacher Readership (Professional)*: The extent to which the teacher reported reading articles on teaching and reading.
17. *Principal Engagement*: The extent to which teachers perceived that the school principal discussed their own teaching with them, achievement standards, methods, and the content that students should read.
18. *Staff Meetings*: The extent to which the teacher reported that curriculum, methods, and teacher development were discussed at staff meetings.
19. *Story Reading Aloud*: The extent to which the teacher reported that he/she read aloud to students in order to encourage them to read more.
20. Literature *Emphases*: The extent to which the teacher reported his/her students to be involved in independent reading, discussing books, and reading plays and other materials.
21. *Reading Materials in School*: The existence and size (in terms of the number of books) of the school library and the addition of books to the school library.
22. *Community Resources*: The extent to which a public library, bookstore, and secondary school were nearby.

It can be seen that the indicators concern home conditions of each student, the community in which the school is located, the organizational features of each school, the resources (especially in terms of libraries and books) in each school, the reading program initiatives the school takes, the school principal's activities, the teaching experience of the reading teacher, and each teacher's report on his/her activities and strategies in teaching reading, and his or her views about reading.

Educational planners are interested in identifying those indicators that are under the control of their educational authorities (at the national, regional, or district level) and that have an influence on student achievement. In this study, student achievement was expressed in terms of reading literacy. There are, of course, many other subjects in primary school but, as already stated, if children have problems with reading, they are likely to have problems studying other subjects where the written word is used for instructional purposes. The areas of education under the responsibility of the ministry of education and therefore amenable to policy change cover two main domains: "inputs" to schools and "what happens" in schools.

"Inputs" are concerned with matters such as the school buildings themselves and their maintenance; equipping the schools with desks and seats, a blackboard and shelf space; supplying materials to schools such as textbooks, teacher handbooks, paper, pencils, ballpoint pens and so on. Perhaps more important are inputs such as the quality of teachers and the curriculum. "What happens in

schools" is mostly governed by the quality of teachers in terms of their subject matter knowledge and the aims, strategies, and views they have about the teaching of reading and what and how they actually teach. This is generally a matter of pre-service and in-service teacher training and the extent to which teachers make an effort to keep up-to-date both with their subject matter and the methods to be used in teaching. What the teachers teach is often prescribed in a syllabus (grade by grade and sometimes month by month) that is laid down by the curriculum committees of the ministry or by the national curriculum center.

At the same time, schools are located in communities, some of which have public libraries and bookstores and a secondary school. Other schools are in isolated rural areas and lack such resources. It is of interest to identify if these resources are associated with the more effective and less effective schools.

Chapter 3 describes the procedures used for selecting a subset of indicators related to differences in schools' achievement in reading literacy.

CHAPTER THREE

THE SELECTION OF INDICATORS FOR FURTHER STUDY

As explained in the previous chapter, many questions were asked and a great deal of data were collected about "school inputs" and "what goes on in school". Some of the data for several questions were combined to form composite indicators and others were used as singleton indicators. The first question to be asked was whether or not these indicators were related to reading literacy achievement. Or, more precisely, were the differences in the levels of the indicators related to differences among schools in their levels of reading literacy achievement? Thus, the first task was to select those indicators related to differences in schools' achievement and to discard from further study those indicators that were not related to such differences. The selection of this subset of indicators was undertaken in three steps.

Procedures for Selecting a Subset of Indicators

Step 1

For each country, the simple correlations of each indicator describing students with student literacy scores and each indicator describing teachers or schools with school mean literacy scores were calculated and examined. A cutoff point of magnitude 0.06 for correlations of student indicators with student achievement, and of 0.18 for teacher and school indicators with school achievement was used. These limits were selected because the average standard errors of sampling for correlation coefficients were 0.03 and 0.09 for student level correlations and school level correlations, respectively. Hence, to be sure (95 percent of the time) that the indicator's correlation was not due to sampling fluctuation, the cutoff points chosen were those that were equivalent to two standard errors of sampling.

This exercise was carried out for each system of education in turn and for each domain of reading literacy. As was to be expected, there were some correlations that always exceeded these cutoff points, some that never reached the cutoff points, and some that exceeded the cutoff points in some domains but not in others or in some systems of education but not in others. A subset of the total list of indicators that deserved more detailed examination was extracted by applying the following selection rule: "Retain those indicators which exceeded the cutoff points for at least two of the domains of reading literacy and in **at least** ten systems of education." The application of this rule reduced the total list of about 500 indicators (single, derived: ratio, and derived: composite as explained in Chapter Two) to about 150 indicators. Many of these were subsequently combined into constructs as shown in Chapter Two. The final list contained 15 student indicators, 24 teacher indicators, and 27 school indicators. Four of these

indicators of the home were retained in order to build a Home Background Composite (see Chapter Four).

Step 2

The indicators were to be used to provide information to planners about action to be taken at the school level. Therefore it was important that variation in student indicators included a reasonably substantial component associated with differences between schools and not just differences between students within schools. Otherwise, the differences between schools on these indicators would have been too small to be used as a basis for developing meaningful policy statements. To test for the existence of reasonably substantial between school differences, the intraclass correlations were calculated for each indicator in order to estimate the proportion of the variance among students that could be associated with differences among schools. The following rule was then applied to further reduce the total list of student indicators: "Retain those student indicators having more than ten percent of the variance attributable to differences among schools in at least ten countries." The application of this rule resulted in a further six student indicators being dropped.

Step 3

The teacher and school indicators retained after Step 1 were derived from both single variables and combinations of variables. In a few cases, however, the single indicators had also been combined with other variables to form composite indicators (see Chapter 2). In these few cases the correlations were reinspected and where a single indicator was also included in a composite indicator, it was the indicator with the largest correlation with school performance that was retained.

The Subset of Indicators

After the above three steps had been applied, the total list of indicators was reduced from a maximum possible number of around 500 indicators to 56 indicators. The 56 indicators in the final list were gathered into 10 groups and some comments were prepared in order to show why these indicators should be of interest to educational planners.

A. *Student Activity at Home*
   Frequency reading aloud at home
   Read aloud
   Frequency borrowing books from library
   Voluntary reading
   Time spent on reading homework

Group A (Student Activity at Home) was comprised of indicators that described what the student did in terms of reading at home. There were two indicators about the student reading aloud at home. The frequency of borrowing books from a library (either local or school) was accepted as a measure of interest in reading, as was the frequency of voluntary reading. It was acknowledged that the indicator of time spent on reading homework needed to be treated with caution since it could have been the case that either slower or more interested students would spend more time on this activity.

B. School Context
   Urban-rural
   Community resources

Group B (School Context) consisted of a simple indicator of school location (that is rural or urban) and also an indicator of the extent to which a school was in an area with good community resources (for example, a public library, a bookstore, a secondary school, and a higher education institution).

C. *School Characteristics*
   Type of school
   Student-teacher ratio
   Special student-teacher ratio
   School size
   Hours per year school is open
   Hours instructional time
   No serious problems

Group C (School Characteristics) consisted of indicators about whether the school was a state or private school, the student-teacher ratio, and also the special student-teacher ratio (for pupils with reading problems), the size of the school (total enrollment), the number of hours the school was open per year, the instructional time per year in hours, and finally whether a school reported that it had no serious problems. This last indicator was a singleton indicator based on the perception of the school principal and could be regarded as meaning that the principal saw no serious problem in his or her school about books, teachers, and/or student interest.

D. *School Resources*
Reading materials in school
School resources/student newspaper
School resources
School library books per student

Group D (School Resources) was comprised of reading materials in school (the number of books in the school library and the number of books added in the previous year), whether or not there was a student newspaper in the school, the school resources (existence of school library, extra reading room for students, newspapers and magazines for teachers and students, and a professional library for the teachers), and the number of school library books per student. These indicators all represented the availability of reading resources in the school.

E. *School Initiatives*
Sponsor reading initiatives
Special programs/individual instruction
Program for improvement of reading instruction

Group E (School Initiatives) indicators all concerned initiatives for special reading programs. It is often considered that the mark of a "good" school is that it takes initiatives with respect to its own teaching program.

F. *School Management and Development*
Activities/representing school
Activities/evaluation of staff
Activities/contacts with community
Activities/discuss educational objectives
Activities/"pastoral care"
Activities/development of teachers
Frequency evaluation of teachers' work
Staff meetings
Principal engagement
Degree of parental cooperation

Group F (School Management and Development Activities) indicators were those often used in ever-expanding "effective school" literature. The first six covered the extent to which the school principal undertook particular activities. The seventh indicator concerned the frequency with which the school principal "evaluated" the teachers' pedagogical work. The *staff meetings* indicator consisted of three variables: the extent to which teachers perceived that curriculum content, the presentation of the subject, and the development of

teachers, all of which dealt with in staff meetings. The *principal engagement* indicator concerned the extent to which the teachers perceived themselves to be evaluated by the school principal and involved in the discussion of standards, student achievement, methods of teaching and content of subject matter taught; in short, the extent to which they felt that the school principal considered that he or she was engaged in their work. Finally, the indicator *degree of parental cooperation* has been included in this group. This represents the extent to which the school principal perceived that parents cooperated with the school in terms of support for the school's educational principles or goals.

G. *Teacher Characteristics*
   Percent female teachers
   Time teaching this class
   Total teaching experience
   Teacher readership (expository)
   Teacher readership (literature)
   Teacher readership (professional)

Group G (Teacher Characteristics) involved indicators that described the reading teacher of the sampled class in each school in the study. The indicators were the teacher's sex, the time spent teaching this class, the number of years spent teaching altogether (that is, general teaching experience), and finally the extent to which the teacher read books on science, art, history (expository), novels, poems, plays, children's books (literature), and journal articles on teaching or reading (professional).

H. *Class Characteristics*
   Class size
   Classroom library
   Available books per student in classroom library
   Multigrade class
   Percentage of other language students in class
   Insufficient class materials

Group H (Class Characteristics) included indicators on the size of the class, whether or not there was a classroom library, the number of classroom library books per student in the class, whether or not the class was a multigrade class, the percentage of students with a different mother tongue from the language used in the class, and whether the principal reported an insufficiency of classroom materials for providing instruction for reading.

I. *Teacher Activities*
Practice reading (hours)
Frequency getting reading homework
Questions in class about reading homework
Frequency visiting school library
Reading in Class

Group I (Teacher Activities) involved the amount of time devoted to practicing reading in the class, how often the students were assigned reading homework, whether or not the students were asked questions in class about their reading homework, and the frequency with which they visited the school library.

J. *Teacher Methods*
Comprehension instruction
Encourage to read
High demands and structure
Literature emphasis
Phonics teaching
General assessment emphasis
Assessment of low order skills
Informal assessment

Group J (Teaching Methods) included composite indicators (see Chapter 2) on the extent to which the teachers taught for comprehension of what was read, encouraged the students to read, had high demands and structure (that is, an emphasis on feedback and correctives and on enhancing vocabulary), emphasized phonics teaching, and emphasized assessment. The assumption was that the more these methods were pursued, the higher the achievement should be.

Conclusion

It may be seen that the indicators in the different groups contain implicit hypotheses. One was that the 'better' the contexts of the schools, the higher the achievement would be. A second was that well-managed, initiative-taking schools should produce higher achievement. A third was that schools that were well-stocked with library books (either school or classroom) would produce higher achievement. A fourth was that teachers who were more professional and used particular methods of teaching should produce higher student achievement in reading. The following chapter reports on how the effects of these indicators were examined.

CHAPTER FOUR

INDICATORS DISCRIMINATING BETWEEN MORE EFFECTIVE AND LESS EFFECTIVE SCHOOLS

The concepts of "more effective" and "less effective" schools were introduced in Chapter 1. In summary, the usage of these terms in this report implies that one should interpret the average reading scores for a school only after considering the home circumstances of the students attending that school. It is well known that there will always be a general tendency for schools serving privileged communities to have higher average reading scores than schools serving poor communities. However, it is the schools that deviate from this general pattern that provide researchers with an opportunity to study the enabling effects of a more effective school and the disabling effects of a less effective school. An important feature of this interpretation of the notion of effective schools is that it is possible for either a high or a low scoring school to be described as more effective because its mean score falls above what could be expected from a knowledge of the home circumstances of its students. And, conversely, it is possible for either a high scoring school or a low scoring school to be described as less effective.

Identification of the More Effective and Less Effective Schools

The definitions of "more effective" and "less effective" schools employed in this report were based on the following approach. A "more effective" school was taken to be a school in which the average student reading score was considerably higher than would be expected given the home circumstances of the students attending the school. Similarly, for a "less effective" school the mean student reading score would be considerably lower than expected. The student outcome measure of reading represented a suitable choice for these definitions because of the central importance of reading in the educational process. In many ways, competence in reading represents a prerequisite for a successful education.

It should be pointed out here that the aim of the analyses which compared more effective and less effective schools was not to establish precise measures of the size of the effects of various variables on mean student reading scores, as, for example, might be undertaken by using complex and comprehensive causal models. Rather, the aim was to identify a summary list of variables that would be of interest to educational planners because they tended to differ between more effective and less effective schools, and to explore whether this summary list was consistent across countries.

The first step in the identification of the two groups of schools in each country was to choose a set of variables that could be used as a surrogate measure of

"home circumstances". There were no traditional measures (such as "occupational status", "income level", and "educational attainment") available in the data collected for the study. Nine-year-olds often cannot provide accurate data on these variables and, in some countries, it was not permitted to collect such data. The only variable that provided a surrogate measure of socioeconomic level and was positively correlated with reading achievement in all countries was *number of books in the home*. It was therefore decided to supplement this simple measure with other home variables in order to provide a more comprehensive assessment of home conditions likely to be related to reading performance. The three extra variables selected were: *possessions in the home*, *regularity of meals*, and the *use of the test language in the home*.

The first of these variables was measured by means of a checklist of ten household possessions. The list varied somewhat across countries. This was permitted to occur as part of the study design because of the different levels of economic development across countries. For example, one would expect that an appropriate checklist of possessions in the home would differ markedly between richer and poorer countries, and between countries in warmer and cooler climates. All four of the socioeconomic variables were examined in terms of their intercorrelations. It was expected that the intercorrelations among the variables would be positive because "wealthy" homes in most societies generally have large numbers of books, many material possessions, regular meals, and use the language which is used in the mainstream educational system. For "poor" homes the contrary conditions would be expected. In countries where the intercorrelations for particular variables were inconsistent with this general pattern those variables were removed from further consideration. The list of variables accepted for constructing the composite indicator of "home circumstances" is presented for each country in Appendix C.

The composite measure was correlated with student reading literacy scores on the reading test at the student level and, as would be expected, the correlations were positive for all countries. That is, students from homes with higher values on the home circumstances indicator tended to obtain higher achievement scores on the reading test than students from homes with lower values.

A simple bivariate regression line was established between the home circumstances indicator and student scores on the reading test. The students placed above the regression line were interpreted as exhibiting reading scores that were better than could be expected – after taking their home circumstances into account. Conversely, students placed below the line had reading scores that were worse than might be expected.

The residual scores were then averaged over schools so that a school with a very high mean residual score was identified as a "more effective" school because it had many students whose reading scores were much higher than expected.

It is important to note that this definition of a "more effective" school made it possible for a school to be designated as effective even if it had a relatively low mean reading score – perhaps even considerably lower than the average for all schools in the same country. Similarly, a school with a relatively high mean reading score might, after considering the home circumstances of its students, be designated as a "less effective" school.

Within each country the schools were placed in rank order from the most effective to the least effective school and then 20 schools at each extreme were selected for further study. This provided, for each country, a list of 20 more effective schools and a list of 20 less effective schools. To illustrate, ten of the most effective and ten of the least effective schools in the Netherlands have been listed in Table 4.1 (on p. 24) along with their average reading scores and their average scores on the measure of home circumstances.

It will be noted that the Netherlands had 91 schools but that in Table 4.1 the lowest rank in the "least effective" list of schools was 71 (School T). As pointed out in Appendix C, schools with 10 or fewer students in the final data set were dropped from this analysis, and in the case of the Netherlands this amounted to 20 schools. The average reading score for each school is given in the second column of figures in the table. The international student mean reading score was 500 and the student standard deviation was 100. In the Netherlands, the mean score was 485 and the student standard deviation was 73 (Elley 1992). The mean home circumstances scores for schools have been presented in the fourth column of figures in the table. The international student mean home score was 100 and the standard deviation was 10.

Across all countries there was a tendency for schools with high average reading scores to have high average home circumstances scores because the correlation was positive between these two variables. For example, in the Netherlands the correlation was 0.22 at the between-student level of analysis and 0.40 at the between-school level. However, some schools with low average home circumstances scores were doing better than expected (for example, Schools A, B, and F). Further, some schools with high average home circumstances scores were doing worse than expected (for example, Schools K, R, and T).

Differences Between the Most Effective and Least Effective Schools in All Countries

For each of the indicators described in Chapter Three, the mean indicator scores for the 20 most effective schools and the 20 least effective schools were calculated. These values were then subtracted to obtain a "difference score". The calculations were undertaken after the values for all schools were standardized to a mean of zero and standard deviation of one. The standardization placed all of the indicators on the same scale and made the interpretation of differences

Table 4.1. The ten most effective schools and the ten least effective schools in the Netherlands

School	Effective-ness rank	Average reading score		Average home score	
		Value	Rank	Value	Rank
The 10 most effective schools					
School A	1	537	5	82.0	70
School B	2	551	2	93.4	62
School C	3	556	1	101.9	28
School D	4	543	4	103.7	15
School E	5	545	3	105.3	6
School F	6	518	11	87.8	68
School G	7	531	6	104.9	9
School H	8	525	7	101.5	31
School I	9	524	9	101.1	35
School J	10	522	10	101.9	27
The 10 least effective schools					
School K	62	457	59	104.4	12
School L	63	444	63	95.7	60
School M	64	446	62	98.8	49
School N	65	441	65	95.9	59
School O	66	428	69	92.9	65
School P	67	434	68	97.8	54
School Q	68	438	66	101.6	29
School R	69	437	67	103.9	14
School S	70	403	71	83.9	69
School T	71	422	70	108.0	1

in mean scores between the more effective and less effective schools much easier to interpret across countries.

All 56 indicators were then ranked within each country in order of the absolute magnitude of the differences in the standardized mean scores. Therefore, at the top of this list for each country was the indicator that was most powerful in terms of its capacity to discriminate between the more effective and less effective schools. At the bottom of the list was the indicator with the least discrimination.

The standardization procedure that was applied before creating difference scores between the indicator means for the more effective and less effective schools placed all indicators on a common scale in seeking to assess their importance. However, it should be noted that in so doing it focused interpretation on relative differences between the two groups of schools within a country and not on actual differences. For example, consider the indicator concerned with the frequency with which the student borrowed books from a library. In developing countries the actual values of this indicator for both groups of schools might be low because there are fewer libraries – but this variable may

still be important because the relative differences, assessed by the difference in standardized scores, is quite high. Conversely, in other more developed countries the actual values of the indicator may be quite high for both groups of schools due to the availability of larger numbers of libraries – but the indicator may be less important because the relative difference, assessed by the difference in standardized scores, is quite low.

In Germany (West) this indicator was eighth in the rank order of the 56 indicators. In Hong Kong it was third, and in New Zealand, Singapore, Sweden, and Switzerland it ranked fourth, ninth, eleventh, and tenth respectively. This general pattern of rankings showed that the frequency with which a student borrowed books from a library was quite a consistent indicator across school systems in terms of discriminating between the more effective and less effective schools.

For educational planners, this single example points to an area of educational practice that deserves more detailed analysis for policy development purposes. For example, since the research results showed that frequency of book borrowing was a strong and consistent indicator for discriminating between more effective and less effective schools, the message here is that schools should examine closely their regular practices concerning patterns of student library usage. While it could be argued that frequency of book borrowing was 'the result' of other factors operating within the educational environment – for example, social class differences – there may be many schools where this is not the case. In such settings the frequency of book borrowing taken together with other important factors that can be influenced or changed by schools might add up to 'a cause' of differences in reading literacy performance. These complex questions must await the time and energy required to be exerted by researchers undertaking secondary analyses of the data using sophisticated causal models. Nevertheless, given that frequency of book borrowing does discriminate consistently between more effective and less effective schools, it would appear prudent to suggest that at least some accounting needs to be taken by educational planners of how schools that have low frequency of book borrowing levels can be improved. For instance, perhaps specific suggestions could be given to schools about how they might encourage change in the behavior of students who do not use a library on a regular basis. For example, perhaps student attitudes toward the library could be altered by making it a more inviting place through an improvement in general surroundings, an increase in books that are of most interest to students, and the encouragement of an interesting range of social/cultural activities (such as films, plays, and music) for students within the library.

In the following discussion each of the major groups of indicators has been examined with respect to its within-country ranking; that is, with respect to its importance in discriminating between more effective and less effective schools

in each country. In addition to a within-country ranking, an overall ranking across countries was calculated in order to permit the identification of indicators that most consistently discriminated between the more effective and less effective schools. For example, the indicator that assessed the frequency with which the student borrowed books from a library had an overall ranking of 12 across all countries.

All of these calculations have been summarized in Tables 4.2 to 4.11. Before discussing each of these tables, the conventions adopted in their presentation need to be described. Consider Table 4.2 as an example. There are five indicators listed in this table. In front of the name of each indicator there is a number to indicate the ranking of the indicator across all countries. On the right-hand side of the table are country names listed in **bold** if the indicator was ranked in the 5 most powerful within the country, in *italics* if it was ranked sixth to tenth, and in normal print if it was ranked eleventh to twentieth. This method of reporting the 20 most powerful indicators in each country was a convenient device for separating the most important indicators from the full list of 56. However, it should not be forgotten that all 56 indicators were important because they survived the screening procedures described in Chapter Three.

Table 4.2. Indicators of student activities at home

Int. Rank	Indicator	Countries
56	Frequency reading aloud at home	*Trinidad/Tobago*
53	Read aloud	Finland, France, Indonesia, Netherlands, Slovenia, Switzerland
12	Frequency borrowing books from library	Belgium (French), Finland, Germany (East), *Germany (West)*, **Hong Kong**, Iceland, Netherlands, **New Zealand**, *Singapore*, Sweden, *Switzerland*, **Trinidad/Tobago**, **United States**
2	Voluntary reading	**Denmark**, Finland, France, **Germany (East)**, *Germany (West)*, *Hong Kong*, Hungary, *Iceland*, Netherlands, *New Zealand*, *Portugal*, Singapore, *Sweden*, *Switzerland*, **Trinidad/Tobago**, *United States*, Venezuela
44	Time spent on reading homework	**Canada (BC)**, Denmark, France, **Hungary**, **New Zealand**, Trinidad/Tobago

Student activities at home

From Table 4.2 it can be seen that the two indicators where there are important differences in many countries between the most effective and the least effective schools are the frequency of borrowing books from a library and voluntary reading. Whether these indicators reflect home environments or whether there is more encouragement for these activities in more effective schools is not known. However, both the borrowing of books from libraries and reading for pleasure can be encouraged by teachers. The other three indicators in the table have low overall rankings. Students in more effective schools spend more time on homework than in less effective schools but, although this is one of the more important indicators in Canada, Hungary, and New Zealand, the difference is not great.

School context

Two indicators – the location of the school in terms of urban-rural environment and community resources – are presented in Table 4.3. In terms of overall importance they are quite high on the list (ranks five and seven respectively). In all cases, the more effective schools tended to be more in urban areas and the less effective schools in rural areas. However, with the exception of Hong Kong where all of the more effective schools were in urban areas, there were a few schools which were in rural areas.

Community resources was a composite indicator consisting of the nearness to the school, a public library, a bookstore, a secondary school, and a higher education institution. The more effective schools tended to be more in areas within easy traveling distance of these resources and the less effective schools in more distant areas where such resources were not readily available.

Table 4.3. Indicators of school context

Int. Rank	Indicator	Countries
5	Urban-rural	Belgium (French), Denmark, Finland, *Germany (East)*, Greece, **Hong Kong**, Hungary, Iceland, **Indonesia**, Ireland, **Portugal**, **Slovenia**, *Trinidad/Tobago*, Venezuela
7	Community resources	Belgium (French), **Denmark**, **Germany (East)**, *Germany (West)*, Hungary, Iceland, **Indonesia**, Norway, **Portugal**, **Slovenia**, Spain, *Sweden*, United States, Venezuela

School characteristics

Table 4.4 reports the differences between more effective and less effective schools on certain indicators of school characteristics. Overall, the size of school, that is the total enrollment of the school, came through as important (rank four). The more effective schools had higher enrollments than less effective schools. The actual differences for the mean size of school between the two groups varied a great deal. Figure 4.1 shows these differences for selected countries. School size is probably linked to many "access" to resources measures. For example, large schools are more likely to have school libraries and to be in larger communities which have more community resources.

Table 4.4. Indicators of school characteristics

Int. Rank	Indicator	Countries
40	Type of school	Canada (BC), Denmark, Iceland, Netherlands, New Zealand, **Portugal**, *Spain*, **Trinidad/ Tobago**, *United States*, **Venezuela**
15	Student-teacher ratio	Canada (BC), Germany (West), *Hong Kong*, **Hungary**, *Italy*, **Netherlands**, New Zealand, Portugal, **Singapore**, Spain, **Sweden**, *Venezuela*
35	Special student-teacher ratio	Germany (West), Hong Kong, Iceland, Indonesia, **Ireland**, *Portugal*, Singapore, Slovenia, *Sweden*, **Switzerland**, Trinidad/ Tobago
6	School size	Belgium (French), **Germany (East)**, Greece, **Hong Kong**, *Hungary*, *Iceland*, *Ireland*, *Netherlands*, Portugal, **Singapore**, Slovenia, *Spain*
38	Hours per year school is open	*Hungary*, Portugal, *United States*
37	Hours instructional time	**Belgium (French)**, *Greece*, Hong Kong, Hungary, **Portugal**, *United States*
4	No serious problems	Belgium (French), **Canada (BC)**, Finland, *France*, **Germany (West)**, *Germany (East)*, *Greece*, Hungary, *Ireland*, **New Zealand**, Portugal, Singapore, Slovenia, **Spain**, Sweden, Switzerland, *Trinidad/Tobago*, United States

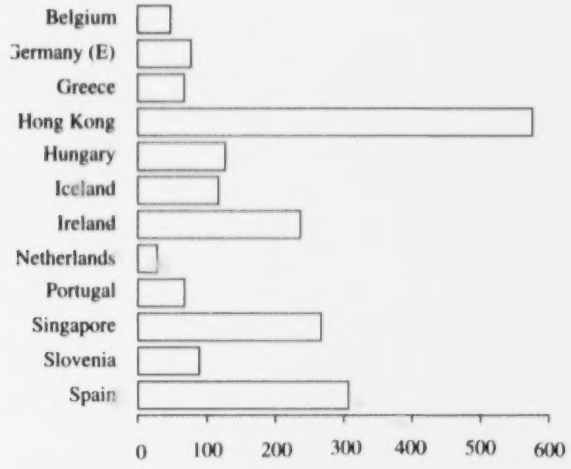

Figure 4.1: Differences in school enrollments between more and less effective schools in selected countries

Therefore, the interpretation of the discriminating power of this indicator requires careful thought.

Hong Kong, Singapore and Spain stood out as representing large differences in enrollment. The second most important indicator (rank four) was *No serious problems*. When asked whether their school had experienced different problems about equipment, staff, motivation and the like, the school principals in the more effective schools tended to indicate that they had no such problems.

The third most important indicator (rank fifteen) was student-teacher ratio. This is not the same as class size. The student-teacher ratio was calculated from the total enrollment of the school divided by the number of full-time or full-time equivalent teachers. It reflected the wealth of resources in terms of teachers. Although this emerged as an important indicator, the number of students per teacher *difference* between more effective and less effective schools ranged from nineteen in Venezuela (that is, 45 students per teacher in the more effective schools to 26 students per teacher in the less effective schools) to ten in Italy, nine in Hong Kong and only 2.4 students in Sweden. The student-teacher ratio is a malleable entity but its manipulation by educational planners very much depends on available resources. However, it is clear that in certain countries efforts should be made to reallocate resources to reduce the gap.

The other four indicators of school characteristics had lower ranks. In all cases, the less effective schools had fewer students per special reading teacher.

One would expect that, within a country, there would be little or no variation in the hours per year that schools are open for instructional purposes. This was

clearly not the case for some countries where the difference between the more effective and less effective schools varied a great deal (for example, the more effective schools were open for instruction 38 hours per year more in Hungary and 51 hours per year more in the United States). In all countries the more effective schools were open for more instructional hours. Why there should be up to 60 hours difference is not clear, but the differences indicated something for educational planners to examine.

Type of school represented private vs. state schools. In all cases, there were more (but in Iceland only one) private schools among the more effective schools and more state schools among the less effective schools. This indicator applied, of course, only in countries where private schools exist.

The indicator of hours instructional time referred to the number of hours per week that school principals reported that instruction was provided. In some cases, the average instruction time per week in more effective schools was greater (but often only 30 minutes per week) than in the less effective schools. The United States had a difference of 1 hour and 30 minutes per week. Perhaps this was a sign of a greater commitment of teachers in more effective schools or of a particular school or district policy.

School Resources

The results for four indicators of school resources are presented in Table 4.5. The indicator of *reading materials in school* was a composite variable made up from the *number of books in the school library* and the *number of books added to the school library*, and was clearly an important resource (rank eight). School library books per student differed between more effective and less effective schools from five to ten books per student. It should be noted that for large schools with 1000 or more students this can represent a lot of books.

The school resources indicator was quite important (rank fourteen). It was composed of a school library, a reading room for students, a student/school newspaper or magazine, and a teacher (professional) library. Whether or not a school produced a school magazine or newspaper can sometimes be dependent on national traditions. However, for some countries it would also be due to the capacity of the teacher to urge the students to undertake this activity.

In all cases, the more effective schools had more resources than less effective schools. Again, for the educational planner, the availability of finance would be a major constraint in addressing these indicators. However, it is clear that well-stocked school libraries represent a most significant resource for helping children to improve their reading literacy. The more effective schools also tended to have a student or school newspaper or magazine.

Table 4.5. Indicators of school resources

Int. Rank	Indicator	Countries
8	Reading materials in school	Finland, *France*, Germany (West), Greece, Hong Kong, *Indonesia*, **Ireland**, **Netherlands**, *New Zealand*, Portugal, *Singapore*, Slovenia, *Spain*
28	Student newspaper	**Belgium (French)**, *Canada (BC)*, Greece, Hungary, Indonesia, *New Zealand*, Norway, Portugal, Singapore, Slovenia, Spain, United States
19	School library books per student	*Belgium (French)*, *Canada (BC)*, France, Germany (West), Indonesia, *Ireland*, **Netherlands**, **New Zealand**, Portugal, Trinidad/Tobago, *United States*, **Venezuela**
14	School resources	*Belgium (French)*, **Canada (BC)**, Denmark, Germany (East), Greece, Iceland, **Indonesia**, Portugal, **Spain**, Switzerland, Trinidad/Tobago, United States, Venezuela

School initiatives

The results for the indicators of school initiatives in reading are given in Table 4.6. The overall ranks of importance were 16, 21, and 32. In all cases, more effective schools undertook more initiatives than less effective schools. There is certainly a message here for educational planners to stress this activity in pre-service and in-service teacher training, and through inspectors' visits and school principal training programs.

Table 4.6. School initiatives

Int. Rank	Indicator	Countries
16	Sponsor reading initiatives	*Belgium (French)*, *Denmark*, Germany (East), Germany (West), **Iceland**, Italy, Netherlands, New Zealand, *Portugal*, *Slovenia*, Spain, *Switzerland*, Venezuela
32	Special programs/individual instruction	**Finland**, *France*, **Greece**, Italy, Netherlands, Norway, Singapore, *Spain*, Sweden
21	Program for improvement of reading instruction	*Belgium (French)*, *Canada (BC)*, Germany (West), Hong Kong, Italy, Portugal, *Singapore*, **Spain**, Sweden, **Switzerland**

School management and development

Table 4.7 presents the results on ten indicators concerned with school management and development. The *degree of parental cooperation* had the highest rank of all indicators in the 56 indicators selected from the 300 initially examined (see Chapter Three).

The question in the School Questionnaire was:

> What is the degree of parent cooperation with the school in terms of support for the school's educational principles or goals (compared with other schools you know)? *(Circle only one)*
>
> | | |
> |---|---|
> | Much below average | 1 |
> | Below average | 2 |
> | Average | 3 |
> | Above average | 4 |
> | Much above average | 5 |

In Belgium (French), for example, the more effective schools had a mean value of 3.4 and the less effective had a mean value of 2.7. In Germany (West) it was 3.5 to 3.0; in Greece 4.3 to 3.4; in the Netherlands 3.5 to 3.1; in New Zealand 4.2 to 3.1; and so on.

This is a difficult indicator to interpret; it is the school principal's perception of the degree of parental cooperation. Is it that the school principal and teaching staff make more effort with parents or is it that some neighborhoods have parents who show more interest in the school? It is probably a combination of both. Whatever the exact cause, it is clear that parent cooperation is important and that all effort should be made to foster it.

The activities indicators also represent the principal's perception of the importance of the activities he or she performs as principal.

The question was:

Please rank the following activities in order of importance in your work as a school principal. *('1' is the most important activity, '8' is the least important activity, 'NA' = not applicable. Do not assign equal rankings.)*

rank of importance

a) representing the school at official meetings _____
b) evaluation of staff _____
c) contacts with local community (e.g. parents, community organizations, local industry) _____
d) discussing educational objectives with the teaching staff _____
e) administrative tasks concerning the functioning of the school (e.g. regulations, disciplinary duties, school budget, timetable) _____
f) using records of students' progress _____
g) taking care of issues of 'pastoral care' (e.g. student problems, guidance, welfare) _____
h) activities aimed at the professional development of teachers _____

In all cases, the principals of more effective schools regarded these activities as more important than principals in less effective schools. They are not *the* most important overall indicators differentiating more effective from less effective schools but they are important in several countries.

Table 4.7. Indicators of school management and development

Int. Rank	Indicator	Countries
43	Activities/representing school	**France**, Germany (East), Hong Kong, Ireland, Netherlands, Singapore, **Slovenia**, Sweden
24	Activities/evaluation of staff	Belgium (French), *Finland*, *France*, *Germany (East)*, *Germany (West)*, Ireland, *Netherlands*, New Zealand, *Singapore*, Slovenia, **Venezuela**
42	Activities/contacts with community	Canada (BC), Denmark, Finland, **France**, Germany (West), Iceland, Slovenia
47	Activities/discuss educational objectives	*Hungary*, Indonesia, Ireland, **Norway**, Sweden, Trinidad/ Tobago
48	Activities/"pastoral care"	Belgium (French), *Denmark*, Netherlands, Norway, *Slovenia*
52	Activities/development of teachers	*Canada (BC)*, **Germany (East)**
33	Frequency evaluating teachers' work	*Canada (BC)*, Denmark, Finland, **France**, Germany (East), Italy, **Portugal**, **Singapore**, *Spain*, United States
46	Staff meetings	*Belgium (French)*, Switzerland, **United States**
45	Principal engagement	**Denmark**, Finland, France, Ireland, New Zealand, Singapore
1	Degree of parental cooperation	**Belgium (French)**, Canada (BC), *Denmark*, **Germany (West)**, **Greece**, Ireland, *Netherlands*, **New Zealand**, *Norway*, **Singapore**, **Slovenia**, **Spain**, **Sweden**, **Switzerland**, *Trinidad/Tobago*, **United States**

Teacher characteristics

The indicators presented in Table 4.8 deal with teacher characteristics. The indicator of the total number of years of teaching experience showed that more effective schools always had teachers with more years of teaching experience than the teachers in the less effective schools (e.g., France 25.1 to 15.8; Greece 18.6 to 10.5; Sweden 22.0 to 17.0; and the United States 17.5 to 8.8).

In many countries, there were nearly 100 percent female reading teachers. Where this was not the case, it was found that the more effective schools always

had a higher proportion of female reading teachers than the less effective schools. It would seem questionable to have a policy of only having female reading teachers -- especially since equality of job opportunity is a sensitive political issue!

Some education systems have a policy of the same teacher following the same class of students for a number of years. In other systems the teacher

Table 4.8. Teacher characteristics

Int. Rank	Indicator	Countries
10	Percent female teachers	Canada (BC), *Finland*, **Germany (East)**, Greece, *Hong Kong*, **Iceland**, *Indonesia*, Ireland, Norway, Singapore, *Sweden*, Switzerland, United States, *Venezuela*
22	Time teaching this class	Belgium (French), France, **Greece**, Hungary, *Iceland*, *Italy*, New Zealand, Norway, *Switzerland*, Trinidad/Tobago
13	Total teaching experience	**Canada (BC)**, *Denmark*, **France**, **Greece**, Hungary, *Indonesia*, *Italy*, **Norway**, *Sweden*, *Trinidad/ Tobago*, **United States**
36	Teacher readership (expository)	Hong Kong, *Hungary*, Italy, *Netherlands*, *Slovenia*, Switzerland
23	Teacher readership (literature)	Germany (West), *Hungary*, Indonesia, Italy, *Slovenia*, Spain, **Switzerland**, United States, *Venezuela*
34	Teacher readership (professional)	*Germany (East)*, Greece, Hungary, *Ireland*, Norway, Singapore, Slovenia, Spain, United States

changes each year. In countries where both approaches existed, the more effective schools generally had teachers who had taught the class for more years than the less effective schools.

Literate and professional teachers are obviously considered to be desirable. In most cases, the teachers in effective schools read more on the teacher readership indicators than their counterparts in less effective schools. [*teacher readership (expository)* refers to the extent to which teachers say that they read books on history, art, and science. *Teacher readership (literature)* concerns the reading of novels, poems, plays, and children's books. *Teacher readership*

(professional) concerns the reading of articles on teaching and articles on reading.]

In summary, the implications for educational planners are that the following policies are worth further consideration: having more female reading teachers in the primary grades; seeking ways to ensure that experienced teachers have the incentive to stay in the classroom as teachers; arranging for the possibility of more teachers staying with the same class for several years; and encouraging teachers to read themselves -- both professionally and for leisure.

Classroom conditions

The results for six indicators of classroom conditions have been given in Table 4.9. The highest ranked indicator is classroom library (rank eleven). In this study of more effective vs. less effective schools larger class sizes were to be found in the effective schools. This is most likely to be an artifact of the tendency for school principals to allocate the slower learners to smaller classes. In some systems it might also be associated with urban/rural differences because rural schools typically have smaller classes. Sometimes the differences were large (Indonesia 40 to 28), sometimes of a medium-sized difference (Hong Kong and Singapore, both 40 to 33 or 34) or small (Iceland 21.6 to 19.0).

Having a classroom library is important, and the number of books per student in the classroom library is also of relevance. This finding, coupled with the school library importance shown in Table 4.5 indicates the great necessity of having sufficient books for the students to read.

The perception by the school principal that there were insufficient classroom materials is coupled with the earlier indicator *no serious problems* in terms of equipment and materials. It is, however, the effective schools that report insufficient classroom materials more often than the less effective schools. This probably reflects the drive of the school principals in more effective schools to provide more materials for their students.

Often it is the case that there is a general policy regarding the acceptance of multigrade classes within a country. Occasionally, it is left to the school. In general, there was no difference on this indicator. The *proportion of the class not having the test language* is a similar indicator. The fact that there tends to be no difference in the percentage of other language students between the more effective and less effective schools indicates that where a country had other language students they tended to be spread equally across all schools.

Table 4.9. Indicators of classroom conditions

Int. Rank	Indicator	Countries
20	Class size	*Denmark*, Germany (West), *Hong Kong*, *Iceland*, *Indonesia*, **Netherlands**, Portugal, **Singapore**, Slovenia, Spain, **Switzerland**
11	Classroom library	Belgium (French), Denmark, **Germany (West)**, *Ireland*, Netherlands, New Zealand, **Slovenia**, Spain, Switzerland, **Venezuela**
26	Available books per student in classroom library	**Finland**, Germany (West), Germany (East), *Iceland*, **Indonesia**, **Ireland**, New Zealand, Norway, **Trinidad/Tobago**, **United States**, *Venezuela*
54	Multigrade class	Canada (BC), United States
55	Percentage of other language students in class	Finland
39	Insufficient class material	Denmark, **Germany (West)**, Germany (East), **Italy**, Netherlands, New Zealand, Norway, *Slovenia*, Sweden

Teacher activities

Table 4.10 presents the results on selected indicators about teachers' activities. The indicator concerned with the *frequency of visiting the school library* showed that when there was a school library the teachers in more effective schools had their students visit the library more frequently than teachers in less effective schools.

The indicator of *frequency getting reading homework* showed that students in more effective schools reported getting more homework than their counterparts in less effective schools, but in most countries there was little difference. The same was true of practice reading.

The low rank of *questions in class about reading homework* probably reflects the fact that nearly all teachers in all schools ask questions about homework. The *reading in class* indicator was clearly important and educational planners should look into ways in which such activities may be fostered.

Table 4.10. Teacher Activities

Int. Rank	Indicator	Countries
50	Practice reading (hours)	Germany (East), Greece, *New Zealand*, *Norway*
51	Frequency getting reading homework	France, Indonesia, **Italy**, New Zealand
49	Questions in class about reading homework	Canada (BC), **Finland**, Germany (East), Greece, *Italy*, Norway
18	Frequency visiting school library	**Belgium (French)**, **Canada (BC)**, **Germany (West)**, **Greece**, **Hong Kong**, *New Zealand*, *Singapore*, Sweden
3	Reading in class	Canada (BC), Denmark, *Finland*, *France*, *Germany (East)*, *Germany (West)*, *Greece*, **Hong Kong**, **Hungary**, *Indonesia*, **Italy**, *Norway*, Sweden, **Trinidad/ Tobago**, United States, Venezuela

Teacher methods

Eight indicators concerned with teacher methods are presented in Table 4.11. All of these indicators are composite indicators. These indicators are important because they are subject to alteration through pre- and in-service teacher training.

The highest overall ranking indicator in this group was *comprehension instruction*. Comprehension instruction measured the extent to which teachers deliberately emphasize the understanding of text.

The second most highly ranked indicator was *literature emphasis* and this was concerned with the extent to which teachers actually encouraged silent reading, listened to students read, emphasized library skills, and the like.

High demands and structure, encourage to read, assessment of low order skills and general assessment skills were of importance in that they were ranked in the 20s and 30s.

Table 4.11. Teaching Methods

Int. Rank	Indicator	Countries
9	Comprehension instruction	Belgium (French), *Finland*, *Greece*, **Hungary**, **Iceland**, **Italy**, *Netherlands*, **Norway**, Spain, **Sweden**, Switzerland
29	Encourage to read	**Denmark**, Hong Kong, Iceland, **Ireland**, **Spain**, Venezuela
30	High demands and structure	**Denmark**, Germany (East), *Hong Kong*, **Ireland**, Italy, *Norway*, **Sweden**, Switzerland, Venezuela
17	Literature emphasis	**Finland**, *Greece*, Hong Kong, **Hungary**, Indonesia, Ireland, *Italy*, **Sweden**, Switzerland
41	Phonics teaching	**Finland**, France, Hong Kong, **Indonesia**, Italy, **Norway**
25	General assessment emphasis	Denmark, Greece, Hungary, **Iceland**, Ireland, **Italy**, **Netherlands**, *Norway*, Sweden, Trinidad/Tobago
27	Assessment of low order skills	*Finland*, France, Hong Kong, **Iceland**, Indonesia, Ireland, Italy, **Norway**, *Portugal*, Trinidad/Tobago, *Venezuela*
31	Informal assessment	Iceland, Italy, Singapore, Spain, *Switzerland*, Venezuela

There were differences between more effective and less effective schools on all of the indicators taken up in this chapter. Nearly all of them can be subjected to change by various categories of educational planners. The implications of these findings for educational planners are taken up in Chapter 5. The actual differences in values for important indicators in each of the countries are presented in Appendix D.

CHAPTER FIVE

A PORTRAIT OF A MORE EFFECTIVE SCHOOL

The data analyses presented so far in this report have described the key indicators that distinguish between more effective and less effective schools in the teaching of reading. These analyses identified indicators that were important within each particular country and across all countries. The analyses were conducted as a sequence of comparisons that make no claim to have assessed either exact "effect sizes" (in terms of scores on the reading literacy test) or "causal connections" (in terms of networks of relationships between indicators themselves and scores on the reading tests). Rather, the analyses are both exploratory and suggestive in pointing the way toward a subset of indicators that are worthy of more careful scrutiny. That is, a completely comprehensive interpretation of the results of the analyses presented in this report must be reserved for long-term intensive study. Such work would preferably include allowances for measurement errors in relevant indicators and could also include some recent methodological advances in multilevel modeling. Nevertheless, it must be recognized that the subset of indicators that maintained cross-country discriminatory power between more effective and less effective schools do offer an opportunity to put forward a set of descriptive statements about some characteristics that are likely to be associated with more effective schools. That is, these important indicators provide a means by which a descriptive portrait of a more effective school may be presented as a generalizable notion across different societies and cultures.

In the hope that this report will find its way into the hands of educational planners, it was decided to prepare such a portrait in a format that addressed questions that are typical of the kind that are put by decisionmakers to the policy and planning units of ministries of education in most countries.

The discussion presented in this chapter draws directly upon the tables describing groups of indicators presented in the previous chapter. In particular, each of the headings under which the discussion has been presented poses an educational planning question that is answered through reference to the results given in one of these tables.

In creating this portrait of a more effective school, sets of descriptive statements were prepared in two major groups. The first group consisted of statements linked to indicators whose overall rank was in the top half of the short list of 56 indicators described in Chapter 4. The second group, described in the following text as 'to a lesser extent', consisted of the remaining indicators in the short list.

It should be re-emphasized that the definition of a "more effective school" employed throughout this report is focused on those schools with reading scores that were much higher than would be expected after due account is taken of the

home circumstances of their students. That is, a more effective school may have a low, middle, or high actual average reading score – but, whatever the value of this score, the main point is that it is at a level that is higher than would be expected when compared with most other schools serving similar communities.

The indicators discussed in this chapter are predominantly concerned with the characteristics of the educational environment that operates within schools. This approach was adopted specifically in order to address the issues that are of most interest to educational planners. However, this does not imply that aspects of the educational environment provided by the home are not important. In fact, it is a well-researched finding that the home educational environment, particularly those aspects concerned with the availability and encouragement of reading resources and activities, play a very important role in the successful acquisition of reading skills.

What Kind of Community Context is Desirable?

The more effective school has a community context that tends to be urban and which features ready access to books through the availability of a public library and a local bookstore. In addition, further education opportunities are offered beyond primary school because of the proximity of a secondary school and a higher education institution.

The policy implications for educational planners here are, in large part, concerned with focusing attention on the general dimension of "isolation". Schools in urban settings are less isolated and, therefore, have access to books and further educational opportunities. While the planner cannot, of course, move the school, perhaps action can be taken to minimize the effects of isolation. Solutions which come to mind are the use of mobile libraries to take books to the children; the encouragement of publishing houses to "go on the road" to display their materials in small communities; the reorganization of secondary school provision to improve funding for boarding places or, as is done in some countries, to provide the first few years of secondary education as an extension of the primary school program in rural communities; and to develop distance education technologies so that higher education institutions can "reach out" to isolated communities.

What School Reading Resources Should Be Available?

The more effective school has a library that is well stocked with books and in which the book stock constantly grows to meet the demands of the school enrollment. In addition to the library there is a reading room for students and a separate room that has been set up as a professional library for teachers. There are also opportunities for less formal recreational reading through the availabil-

ity of newspapers and magazines for both teachers and students. The school also publishes its own student newspaper or magazine on a regular basis.

The policy implications for planners here are concerned with the areas of school building design, library book provision, and the school program. School building design should provide adequate special purpose space for a school library and ideally also include separate areas for a student reading room and a professional library for the teachers. Educational budgets need to be prepared to establish adequate book supplies and to have them grow in order to meet enrollment needs. The encouragement of the production of school newspapers and magazines could proceed through informal channels such as publicizing the importance of this activity, or perhaps through more formal approaches by establishing student newspaper and magazine production as a specific part of the school language curriculum.

What Type of Teacher Should Be Appointed?

The more effective school has more female than male reading teachers. These teachers are experienced and are more likely to be encouraged to follow classes through two or more years of their education. The reading interests of the teachers tend to include fictional literature, poetry and plays, and books for children. To a lesser extent the teachers in more effective schools read books on the arts and sciences as well as professional literature about teaching and reading.

The educational planner has a problem in seeking to change the sex composition of the teaching work force towards schools with more female teachers. The capacity to manipulate teaching appointments so as to favor one gender is probably a thing of the past in most countries. Nevertheless, the planner can take action to ensure that experienced teachers are not lost to the education system by constructing favorable career structures that include incentives for experienced teachers to stay in the classroom. The realignment of teaching into "vertical" teaching roles that would permit them to follow a class of students over several years may require support from school principals and will definitely require professional development programs for many teachers who are accustomed to being master teachers on one grade level. If the plan is to encourage teachers to read widely then perhaps, as mentioned in another section of this chapter, the provision of both a teacher professional library and a range of professional reading materials should be provided. Alternatively, using a more "directive" approach, planners could arrange professional development programs that include discussion of a wide range of literature, plays and poetry, and children's books.

What Should Be the School Size, Type, and Staffing Levels?

The more effective school tends to be a school that is larger than average in size. This school has a favorable student to teacher ratio for classroom teachers. To a lesser extent the more effective school has a higher special student-teacher ratio and provides more hours of instruction per week and per year.

In the first instance it should be stated that the message for educational planners is **not** to turn all schools into large private schools. This would clearly not be feasible and could be missing the real message that larger private schools are more effective because they may have a school reading program and the associated resources that are closely aligned with the goals and aspirations of the communities from which they draw their students. What is being called for here is that educational planners take a closer look, through systematic research, at exactly how such schools undertake the teaching of reading. On the other hand, educational planners can take action on general staffing and specialized staffing – provided that sufficient resources are given by ministries of education.

What Classroom Conditions Should Be in Place?

The more effective school has a classroom library in which sufficient books are available for each student. To a lesser extent, this school has a principal who reports that there are insufficient classroom materials. The effective school also has relatively larger class sizes which most likely is either a reflection of the tendency for effective schools to be located in urban settings where enrollments tend to be higher, or is an artifact of common school management policies where less able readers are placed in smaller classes.

The educational planner needs to consider the notion of a school library as having an extension into the classroom. That is, it is not enough to provide books for the students because their placement at both the school and classroom level is also important. This would be a simple issue to address through communication with school principals. The matter concerning school principal complaints about insufficient classroom materials is not so easy to tackle because in bureaucratic structures like ministries of education, there will inevitably be pressures to attend first to those who complain most of all. Perhaps the message for the educational planner here is to make very sure that there are not too many schools who are "suffering in silence"!

How Should the School Be Managed by the Principal?

The more effective school has a principal who gains parental support for the principles and objectives of the school and who gives high emphasis to the evaluation of school staff. To a lesser extent, he/she evaluates the pedagogical work of the teachers frequently, has contacts with the local community (community organizations and local industry), represents the school at official

functions, and takes care of "pastoral" issues (such as students' problems, guidance, welfare). Also, to a lesser extent, the school principal holds staff meetings regularly in order to encourage wide discussion of standards, appropriate content and educational objectives, alternative teaching methods, and the progress of individual students and classes.

Part of the work of educational planners is to ensure that school principals are trained not only in ways of organizing the school but also in the roles the principal should play with the community and with the work and development of the staff. The above profile of school principal behavior is only occasionally addressed in educational administration programs offered to school principals. It is, therefore, important that those components of the profile that encompass the kinds of broad professional skills that one would expect of a respected community leader be included in formal teacher education and school principal training programs. Perhaps it is time for faculties of education and teacher training colleges to review the professional/managerial parts of their programs and bring these into line with what the community views as essential skills for modern and successful managers.

Also of some concern is the practice of leaving teachers in classroom-only situations for twenty or more years without the opportunity to gain experience in working and communicating with the world outside the school. Finally, planners can redesign the formal mechanisms by which school principals are appointed so as to ensure that the job specifications for these positions give high priority to professional leadership qualities.

What Special Initiatives Can Be Undertaken to Improve Reading?

The more effective school sponsors different types of reading initiatives, has programs for the improvement of reading instruction and, to a lesser extent, takes initiatives to have special reading programs such as extra class lessons in reading, individualized instruction or special remedial reading courses.

Given the key role of learning to read, educational planners must ensure that schools do provide programs for improving reading. This implies that school principals and teachers recognize that such programs are necessary and that they institute them. These concepts should be introduced into teacher training programs and school principal training programs. The school inspectors should check on the existence of these activities (for example on the school inspector's checklist) and encourage the teachers to institute such programs.

What Teacher Activities Should Be Encouraged?

The more effective school has teachers who ensure that their students read a great deal in class, who have their students visit the school library on a regular basis and who, to a lesser extent, set more reading homework, ask questions

about the homework the next day, and devote more time per school week to the teaching and practice of reading. In short, the effective school provides more reading at school and requires more reading homework from the students.

Given that the opposite is true of the less effective school, the educational planner must ensure that school timetabling is prepared so that there is adequate time set aside for reading in school and that the necessity for reading homework and the checking of reading homework is highlighted in teacher training programs (both pre- and in-service). Where there is a ministry department of teacher education the planners should ensure that the above activities are emphasized in the teacher education program. Where the content of teacher education is decided upon by individual teacher training colleges or faculties of education the planners must ensure that those deciding on the content are made aware of findings such as the above.

What Teaching Methods Should Be Adopted for Reading Lessons?

The more effective school is one where the teachers emphasize, above all, the understanding of what is read. This is undertaken through dramatizing stories, orally summarizing what has been read, relating personal experiences to what has been read, making predictions from what has been read, looking for a main theme, making generalizations and inferences from what has been read and similar activities. These teachers also emphasize that the students should read books and plays. The teachers in the more effective school consider that reading should be assessed, that mistakes should be corrected immediately, that there should be systematic enhancement of vocabulary using sequenced materials. To a lesser extent, these teachers believe that students should be encouraged to read and use the library.

The teachers in the more effective school conduct assessment of their students' progress at regular intervals. In some countries, the more effective school emphasizes phonics teaching (sound-symbol relationships, word attack skills, and sounding out words).

All of these activities are important teaching methods and behaviors and should form the basic content of teacher training programs for reading teachers. The educational planner must ensure that these methods have a central place in teacher training programs. Furthermore, the modes of regular assessment that teachers can employ must be realistically demonstrated to teachers. The actions that an educational planner can take to do this are similar to those described in the section above.

What Out-of-school Activities Should Students Be Encouraged to Undertake?

The more effective school contains students who undertake a lot of reading in their leisure time, students who borrow books frequently from libraries (school or public) and, to a lesser extent, students who spend more time on reading homework and read aloud more frequently.

Educational planners can ensure that these activities take place by having them stressed in the training programs for both school principals and teachers. For example, these programs could emphasize the use of individual meetings with parents, parent-teacher workshops, and even home visits in order to encourage parents to show more interest in their children's reading, to have them encourage their children to borrow and read books and to ensure that their children do their homework. The relationship of schools with parents and having parents provide a reading environment at home is essential.

Conclusion

In this chapter an ambitious attempt has been made to extract the "meaning" behind the statistical analyses presented in the previous chapters. The portrait of a more effective school emerged by seeking patterns in the data that were consistent across a large number of countries. However, it should be emphasized that the conclusions drawn from the analyses were based on the extreme ends of the reading achievement spectrum – after taking into consideration the home circumstances of the students attending the schools. Such an approach tends to magnify the impact of indicators of the educational environment in a way that facilitates a more fine-grained inspection of their relative importance. Therefore, the portrait presented here should be seen as a beginning point for further reflection by educational planners upon the complex interactions of people, resources, and value systems that characterize all education systems. This certainly implies that educational planners will need to reform their traditional concerns with inputs to education. In fact, it demands that they will need to come out of their offices and, using this portrait as a preliminary sketch, become involved in the pursuit of more effective schooling through an intimate knowledge of the educational environments both surrounding the schools and within them.

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APPENDIX A

RELIABILITY COEFFICIENTS

Table A.1. Reliability coefficients (KR-21) of domain tests (Pop A)

Country	Narrative	Expository	Document
Belgium/French	.76	.78	.75
Canada/BC	.78	.79	.74
Denmark	.84	.86	.83
Finland	.63	.64	.61
France	.72	.70	.65
Germany/East	.81	.83	.78
Germany/West	.80	.83	.76
Greece	.76	.75	.74
Hong Kong	.78	.71	.65
Hungary	.76	.82	.74
Iceland	.78	.81	.75
Indonesia	.71	.73	.67
Ireland	.78	.77	.75
Italy	.74	.76	.75
Netherlands	.78	.79	.76
New Zealand	.78	.76	.74
Norway	.78	.80	.77
Portugal	.75	.75	.76
Singapore	.77	.71	.72
Slovenia	.79	.81	.73
Spain	.78	.78	.75
Sweden	.76	.81	.76
Switzerland	.78	.82	.76
Trinidad/Tobago	.82	.81	.79
United States	.74	.70	.63
Venezuela	.69	.74	.69

APPENDIX B

LIST OF CONSTRUCTS FORMED

From the Student Questionnaire

Home literacy interaction

1. How often people at home read to student in test language
2. How often student reads in test language to someone at home
3. How often parents or others at home ask student about his/her reading
4. How often student reads aloud to someone at home

Read aloud

- Does the student read aloud at home:

1. newspaper;
2. magazine;
3. comic book;
4. letters;
5. words on TV screen.

Voluntary reading (reading for enjoyment)

1. How often the student reads books for fun
2. How often the student reads comic books for fun
3. How often the student reads magazines for fun
4. How often the student reads newspapers for fun
5. How often the student reads written directions or instructions to do something he/she enjoys

Reading in class

1. How often the student reads textbooks in reading or language class
2. How often the student reads story books in addition to textbooks in reading or language class
3. How often the student uses workbooks or practice exercises in reading or language class
4. How often the student reads textbooks or practice exercises in science, geography, or environmental science
5. How often the student looks up information in books like encyclopedias, dictionaries, manuals or maps for school work

From the Teacher Questionnaire

Comprehension instruction

- How often students in class were typically involved in:

1. Dramatizing stories
2. Orally summarizing their reading
3. Relating experiences to reading
4. Making predictions during reading
5. Diagramming story content
6. Looking for the theme or message
7. Making generalizations and inferences
8. Studying the style or structure of a text
9. Comparing pictures and stories
10. Student leading discussion about passage

High demand and structure

- The extent to which the teacher agreed or disagreed with the following statements:

1. Most of what a child reads should be assessed
2. Every mistake a child makes in reading aloud should be corrected at once
3. Children should learn most of their new words from lessons designed to enhance their vocabulary.
4. Reading learning materials should be carefully sequenced in terms of language structures and vocabulary.

Phonics teaching

- How often students in class were typically involved in:

1. Learning sound-symbol relationships and/or phonics
2. Word-attack skills (e.g. prediction)
3. How often teacher assessed phonic skills

Encouragement to read

- How often the teacher reported using the following strategies when teaching reading:

1. Encourage children to read more
2. Encourage children to use the library more

Taking student interest into account

1. How often the teacher used 'Records of Student Interest' as an assessment method

- How often the teacher used the following methods to discover his/her students' needs in reading:

2. Knowledge of students' reading interests
3. Informal observation
4. Interviews

General emphasis on assessment

1. How often students were involved in answering reading comprehension exercises in writing.

- How often the teacher used the following methods to discover his/her students needs in reading:

2. Exercises in workbooks and textbooks
3. Tests in workbooks and textbooks

- How often the teacher reported using the following assessment methods:

4. Multiple-choice questions on reading
5. Written open-ended questions on material read

Assessment of lower order skills

- How often the teacher reported assessing the following aspects of reading with all or most of his/her class:

1. Word recognition
2. Vocabulary
3. Use of background knowledge
4. Sentence understanding
5. Reading study skills
6. Amount of reading
7. Decoding

Teacher readership (expository)

- How often the teacher reported reading:

1. Books on history or politics
2. Books on the arts
3. Books on science

Teacher readership (literature)

- How often the teacher reported reading:

1. Novels or short stories
2. Poems
3. Plays
4. Books for children

Teacher readership (professional)

- How often the teacher reported reading:

1. Articles on teaching
2. Articles on reading

Principal engagement

1. Whether or not the teacher perceived his/her work to be evaluated by the school principal (or deputy school principal)

- Whether or not the teacher reported that the school principal (or deputy principal)

2. Discussed with him/her explicit achievement standards for the subjects he/she taught
3. Asked for evaluation results or progress of his/her students' in reading
4. Made suggestions about the choice of instructional methods in reading
5. Encouraged contacts among teachers
6. Initiated activities directed at the professional development of teachers
7. Made suggestions about the content that must be covered in reading

Staff meetings

- If staff meetings were held, the extent to which teachers reported that the following items occurred as subjects of discussion in staff meetings:

1. Curriculum content
2. The way the subject matter is presented
3. Professional development of teachers

Active teaching of comprehension

1. How often teachers reported that their students were typically involved in learning new vocabulary systematically (e.g. from lists)

- How often the teacher used the following instructional strategies when teaching reading:

2. Introduce the background of a passage before reading it
3. Ask children to describe their strategy for understanding
4. Show children how to understand a text
5. Compare stories, poems, fables and tales

- How often the teacher used the following methods to discover the students' needs:

6. Teacher-made vocabulary tests
7. Standardized or formal tests of comprehension
8. How often the teacher assessed literacy appreciation

Comprehension through graded materials

- The extent to which the teacher agreed or disagreed with the following statements:

1. When my pupils read to me, I expect them to read every word accurately
2. All children should enjoy reading
3. Children should always understand why they are reading
4. Children who cannot understand what they read haven't been taught proper comprehension skills
5. Children should not start a new book until they have finished the last one
6. Children should always understand what they are reading
7. Children should always choose their own books to read

Story reading aloud

1. The extent to which students were involved in the discussion of books read by students
2. The extent to which the teacher read aloud to the students

- The extent to which the teacher agreed with the statements:

3. Every day children should be read to by the teacher from a story book
4. Children should be encouraged to read texts they have written
5. The extent to which teachers 'read attractive stories to students' to encourage them to read outside school

Literature emphasis

- The extent to which the teacher and his/her students were involved in the following reading activities:

1. Independent silent reading in a library

2. Listening to students reading aloud to small groups or pairs
3. Discussion of books read by students
4. Learning library skills
5. Reading plays or dramas
6. Reading other students' writing
7. Reading in other subject areas
8. Hold discussions about other books

From the School Questionnaire

Reading materials in school

1. Number of books in school library
2. Number of books added to school library in last year

Community resources

- The extent to which the following were *not readily available*, *available within 2 hours one way travel*, or *available locally (within 30 minutes one way travel)*

1. Public library
2. Bookstore/book department store
3. Secondary level schools
4. A higher education institute

APPENDIX C

PROCEDURES FOR THE IDENTIFICATION OF MORE EFFECTIVE AND LESS EFFECTIVE SCHOOLS[1]

This appendix presents information on the procedures used for the identification of more effective and less effective schools and for the grouping of countries.

Identification of More Effective and Less Effective Schools

In all countries there was at least one intact class per selected school in the sample. When more than one class had been tested within a school, one class per school was selected at random. This action was taken in order to simplify the analyses. Second, it was agreed that a class should have at least 11 students in it in order to have reasonably stable estimates for the class. After classes were dropped, a country had to have at least 60 schools left to be retained in the analysis so that the approach of taking the extremes of an "effectiveness" dimension could be applied. For several countries with more than one class per school in the sample, some exploratory runs of the data analysis were undertaken. These revealed that the identification of more effective and less effective schools was not influenced by whether classes were randomly excluded from schools in which more than one class had been sampled.

a) *Establishing the regression slope*
The reading literacy score for students was predicted by a "Home Composite" for all students in the country. A check was then made to identify school slopes which were very different from the overall slope. There were only seven such schools. These schools were each examined separately. Four schools were dropped that had a negative slope. The overall regression for each country was then run again without the deviating schools. It was this regression slope that was applied to all schools within a country.

b) *Calculation of student residual and school 'residual'*
Using the regression coefficient, an expected score for each student was calculated. The expected scores for students were then subtracted from their actual scores and this residual was then aggregated to the school level. Schools were then listed in terms of these residual scores which ranged from a high positive value (typically about +1 standard deviation of the overall score) to a high negative value. The top 20 schools were selected as the "more effective" schools and the bottom 20 schools as "less effective" schools.

As explained in Chapter 4, a Home Composite was formed for each country. In Table C.1 the correlations of those variables chosen to represent home circumstances with the Home Composite are presented in the first four columns. The fifth column of Table C.1 presents the correlation of the home background composite with the overall reading

[1] This technical note was written by Stefan Seyfert.

literacy score at the student level. The final column presents the home composite correlation with the overall literacy score at the school level.

Table C.1. Correlations of home background variables with home background composite and of the home background composite with overall reading literacy score

Country	Use test lang. at home	Home posses - sions	No. of meals per week	No. of books at home	Correlation of Home Background Composite with Reading Literacy Score	
					Student level	School level
Belgium/French	.51	.71	-	.77	.27	.56
Canada/BC	-	.81	-	.81	.20	.44
Denmark	-	-	-	1.00	.13	.28
Finland	-	.77	-	.77	.16	.22
France	.54	.68	-	.78	.25	.35
Germany/East	-	.76	-	.76	.18	.34
Germany/West	.63	.56	-	.72	.25	.46
Greece	-	.81	-	.81	.29	.49
Hong Kong	-	.80	-	.80	.07	.33
Hungary	-	.80	-	.80	.35	.65
Iceland	-	.75	-	.75	.07	.29
Indonesia	.65	.77	-	.53	.32	.62
Ireland	-	.80	-	.80	.27	.49
Italy	-	-	-	1.00	.19	.12*
Netherlands	.63	.53	.57	.64	.22	.40
New Zealand	.55	.66	.55	.72	.36	.66
Norway	-	.77	-	.77	.15	.30
Portugal	-	.87	-	.87	.39	.61
Singapore	.71	.75	-	.71	.33	.70
Slovenia	-	.80	-	.80	.23	.47
Spain	-	.79	-	.79	.27	.66
Sweden	.58	.65	-	.75	.22	.52
Switzerland	.50	.73	-	.80	.29	.40
Trinidad/ Tobago	-	.79	-	.79	.30	.57
United States	-	.80	-	.80	.27	.71
Venezuela	-	.82	-	.82	.23	.48

* It will be noted that the correlation in Italy between the Home Background Composite and achievement is lower at the between-school level than at the between student level. This is because of outliers at the top end of the student distribution of achievement scores at the student level.

Calculation of Indicator Means of More and Less Effective Schools

Once the groups of the more effective and less effective schools had been identified the means for each group on each indicator were calculated. Occasionally, there was missing information for one indicator for one school. In this case the denominator was 19 and not 20.

APPENDIX D

MORE EFFECTIVE AND LESS EFFECTIVE SCHOOLS WITHIN COUNTRIES

This Appendix presents a short summary of the indicators with differences larger than 0.30 of a standard deviation between the more effective and less effective schools in each system of education in the study. These indicators are ranked by size of difference. Next to the name of each indicator there is a column headed ME (More Effective Schools), a column headed LE (Less Effective Schools), for the standardized difference of the means of ME and LE and, finally, SD for the standard deviation. This brings all of the D (difference of means between ME and LE) values onto the same scale so that the D values are comparable.

In what follows, each system of education is described. Next to the name of the country there is a value in parentheses. As will be seen, this is .14 for Belgium (Fr), .07 for Finland, but .29 for Greece. This value indicates the approximate amount of differences in reading literacy achievement due to schools. Thus, for Belgium 14 percent of the differences in achievement are due to differences among schools and 86 percent among students within schools. In Greece this is 29 percent among schools and 72 percent among students within schools. These values must be borne in mind when reviewing the indicators that have the largest differences between effective and ineffective schools in each country.

Although no indicators with differences of less than 0.30 of a standard deviation have been presented, it is important for readers to distinguish between indicators that may have a large difference simply because of the standard deviation and indicators where the real difference is sufficient that there would seem to be grounds for action.

Belgium (French) (.14)

Indicator	ME	LE	Standardized Difference	SD
Parental cooperation	3.4	2.7	0.87	0.83
Instructional time (hours)	24.8	23.4	0.82	1.64
Freq visit school library	2.1	1.4	0.70	0.94
Student newspaper	1.5	1.2	0.69	0.47
Hours/year school is open	924.0	879.4	0.67	66.89
School library bks/student	5.2	1.8	0.62	5.51
Staff meetings	2.7	2.2	0.62	0.85
Progr imp of read instruct	1.5	1.3	0.57	0.48
Sponsor rdg initiatives	1.7	1.4	0.57	0.50
School resources	2.2	1.7	0.49	1.04
Community resources	0.0	-0.2	0.48	0.41
No serious problems	1.4	1.2	0.44	0.44
Evaluation of staff	6.4	5.8	0.43	1.46
Time teaching this class	2.8	2.2	0.41	1.39
Comprehension instr	-0.4	-0.5	0.41	0.31
School size	287.4	237.1	0.37	136.13

In Belgium (French), effective schools are located in areas with more community resources, have higher enrollments, offer more instructional time per week and per year and have more books and resources. It is unexpected that there is a difference in instructional time (hours). It could be that the teachers did not understand the question. This, in turn, affects the indicator hours/year school is open. The teachers in these schools have their students visit the school library more, have taught the same class longer and stress reading for comprehension. The school principals have initiated special reading programs, a school or student magazine or newspaper, and hold staff meetings more frequently. Above all, the more effective schools have more parental cooperation in terms of parents supporting the principles and objectives of the school.

Canada (BC) (.17)

Indicator	ME	LE	Standardized Difference	SD
No serious problems	1.4	1.2	0.60	0.48
Time spent rdg homework	2.9	2.6	0.53	0.53
Freq visit school library	3.3	3.0	0.51	0.65
Total years teaching	17.4	12.7	0.51	9.36
School resources	2.4	2.1	0.42	0.81
Development of teachers	3.4	2.8	0.39	1.68
Freq evaluate tchrs work	3.1	2.7	0.39	0.82
Progr imp of read instruct	1.7	1.5	0.39	0.50
Student newspaper	1.4	1.2	0.37	0.46
School library bks/student	25.7	22.0	0.35	10.84
Multigrade class	1.5	1.4	0.33	0.47
Qs in class about rdg hw	2.8	2.5	0.31	0.78

In Canada (BC) more effective schools have students who spend more time on reading homework. The schools have more school resources, and more school library books per student. They tend to provide a program for the improvement of reading instruction and a student or school newspaper or magazine more often than less effective schools. The more effective schools tend to have teachers with more years of teaching experience and who ask questions in class about reading homework more than teachers in less effective schools. Their school principals evaluate the teachers' work more frequently.

Denmark (.12)

Indicator	ME	LE	Standardized Difference	SD
Community resources	0.2	-0.2	1.09	0.32
Voluntary reading	0.1	-0.2	0.80	0.36
High demands and struct	-0.1	-0.4	0.77	0.31
Encourage to read	0.1	-0.2	0.63	0.39
Principal engagement	-0.4	-0.6	0.61	0.26
Activities/pastoral care	2.5	1.7	0.57	1.47
Total years teaching	20.9	17.3	0.50	7.18
Parental cooperation	3.5	3.2	0.49	0.59
Class size	18.3	16.5	0.47	3.79
Sponsor rdg initiatives	1.4	1.2	0.47	0.41
Urban-rural	1.8	1.6	0.45	0.49
Reading in class	0.0	-0.2	0.43	0.50
Type of school	1.1	1.0	0.40	0.25
General assmt emphasis	-0.2	-0.3	0.39	0.42
Insufficient class material	1.4	1.2	0.39	0.40
Contacts with community	4.5	3.9	0.35	1.67
Time spent rdg hw	2.8	2.6	0.34	0.33
Classroom library	1.8	1.7	0.32	0.44
Freq evaluate tchrs work	2.6	2.3	0.31	1.01
School resources	3.7	3.5	0.31	0.73

Denmark was the only country where only the effect of number of books in the home could be used to identify the more and less effective schools. This means that there are likely to be some home effects in the more effective and less effective schools that were identified. All of the 20 highest ranked indicators have a difference of more than one third of a standard deviation between the more and less effective schools. Schools in urban areas with more community resources tend to be among the more effective. This is also the case where the schools have principals who help their teachers, evaluate the teachers' work, and have programs to help in reading. The teachers in the more effective schools encourage their students to read more, check the reading of every student regularly and emphasize the understanding of words, have the students read more in class, and use evaluation procedures.

Finland (.07)

Indicator	ME	LE	Standardized Difference	SD
Available books/student	2.3	1.4	0.81	1.11
Individual instruction	2.0	1.8	0.74	0.21
Literature emphasis	0.1	-0.2	0.72	0.35
Phonics teaching	-0.1	-0.3	0.64	0.29
Qs in class about rdg hw	3.7	3.5	0.60	0.40
Evaluation of staff	6.5	5.0	0.54	2.68
Assmt of low order skills	-0.2	-0.4	0.53	0.33
Teachers sex	1.8	1.6	0.51	0.47
Reading in class	0.5	0.3	0.50	0.46
Comprehension instr	-0.1	-0.3	0.50	0.31
Voluntary reading	0.7	0.5	0.48	0.28
Urban-rural	1.8	1.5	0.45	0.50
Contacts with community	5.1	4.4	0.43	1.52
Principal engagement	-0.1	-0.2	0.42	0.29
No serious problems	1.8	1.6	0.40	0.50
Freq evaluate tchrs work	3.1	2.7	0.33	1.05
Read aloud	0.2	0.1	0.31	0.34

More effective schools in Finland tend to be more in urban than rural areas, provide more books and have more special programs of individual instruction. The teachers place more emphasis on their students reading books and plays, and on reading in class. The teachers also provide more phonics teaching, ask questions in class about students' homework more frequently, and assess low order skills and emphasize reading for comprehension more frequently.

France (.16)

Indicator	ME	LE	Standardized Difference	SD
Total years teaching	25.1	15.8	0.99	9.30
Freq evaluate tchrs work	1.9	1.1	0.79	1.06
Representing school	6.2	4.6	0.70	2.24
Freq helped with rdg hw	2.6	2.5	0.56	0.26
Contacts with community	3.7	3.0	0.50	1.40
Rdg materials in school	-0.1	-0.2	0.49	0.11
Individual instruction	1.5	1.3	0.49	0.48
Evaluation of staff	4.5	2.8	0.42	3.82
No serious problems	1.3	1.1	0.36	0.40
Reading in class	-0.0	-0.3	0.35	0.73
Read aloud	-0.2	-0.3	0.31	0.39
Assmt of low order skills	-0.1	-0.3	0.31	0.44

The teachers in the more effective schools have more years of teaching experience (9 years), have more reading in class, assess lower order skills more and have more reading aloud than do the teachers in the less effective schools. There are also more reading materials in the more effective schools. The school principals in the more effective schools indicated that they evaluated their teachers' work more – even though this is not permissible in France. However, the value of 1.9 for the more effective schools is very low. This finding should perhaps be discounted since in many small schools in France there was no school principal and it was the class teacher who also completed the School Principal Questionnaire. The representing school indicator in the table most likely refers to teachers.

Germany (East) (.13)

Indicator	ME	LE	Standardized Difference	SD
Development of teachers	4.7	3.4	0.77	1.73
Teachers sex	2.0	1.9	0.73	0.14
Voluntary reading	-0.1	-0.3	0.68	0.33
School size	440.9	356.6	0.55	153.95
Community resources	-0.0	-0.2	0.53	0.33
No serious problems	1.7	1.5	0.47	0.50
Tchr readership (prof)	-0.2	-0.3	0.42	0.38
Reading in class	-0.3	-0.4	0.37	0.40
Evaluation of staff	5.9	5.1	0.36	2.30
Urban-rural	1.7	1.6	0.32	0.49
Practice reading (hours)	2.9	2.6	0.31	0.93
Insufficient class material	1.6	1.4	0.31	0.50

More effective schools are characterized by being located in communities with more resources, by principals who pay attention to staff development, and by teachers who read professional journals/articles, who have more reading in class and more practice reading.

Germany (West) (.13)

Indicator	ME	LE	Standardized Difference	SD
No serious problems	1.7	1.3	0.94	0.50
Freq visit school library	2.1	1.3	0.89	0.89
Classroom library	2.0	1.7	0.76	0.33
Insufficient class material	1.2	1.0	0.74	0.27
Parental cooperation	3.5	3.0	0.72	0.70
Voluntary reading	-0.3	-0.5	0.70	0.31
Reading in class	-0.6	-0.8	0.55	0.38
Freq borrow bks from lib	2.9	2.6	0.53	0.54
Evaluation of staff	6.7	5.2	0.50	3.12
Community resources	0.0	-0.1	0.44	0.37
Available books/student	2.5	2.0	0.44	1.19
Rdg materials in school	-0.18	-0.21	0.42	0.07
Tchr readership (literature)	-0.0	-0.2	0.40	0.38
Sponsor rdg initiatives	1.2	1.1	0.39	0.35
Contacts with community	5.1	4.4	0.34	2.02

More effective schools are characterized by the existence of more classroom libraries, students visiting the school library and borrowing books more frequently, more reading materials in the schools, and more female teachers. The teachers themselves read more literature. The principals in these schools reported that they evaluated their staff and had contact with the community more frequently.

Greece (.29)

Indicator	ME	LE	Standardized Difference	SD
Freq visit school library	2.2	1.3	1.04	0.83
Parental cooperation	4.3	3.4	0.96	0.94
Total years teaching	18.6	10.5	0.84	9.57
Individual instruction	1.5	1.1	0.84	0.48
Time teaching this class	2.9	1.8	0.80	1.38
No serious problems	1.7	1.3	0.80	0.50
Comprehension instr	0.6	0.3	0.78	0.33
Literature emphasis	-0.0	-0.3	0.57	0.37
Instructional time (hours)	20.6	19.3	0.56	2.21
Reading in class	0.8	0.6	0.55	0.34
General assmt emphasis	0.3	0.2	0.51	0.30
Qs in class about rdg hw	3.9	3.6	0.51	0.61
Student newspaper	1.4	1.2	0.47	0.43
School size	302.1	227.7	0.47	159.45
School resources	2.2	1.7	0.46	0.98
Urban-rural	1.9	1.7	0.43	0.35
Practice reading (hours)	3.8	2.8	0.42	2.39
Tchr readership (prof)	-0.0	-0.2	0.42	0.45
Teachers sex	1.8	1.6	0.40	0.50

The characteristics of the more effective schools were that they had teachers who had their students visit the library more frequently, who had more years of teaching experience (8 years), who had been teaching the same class longer, who stressed comprehending what was read, had their students read more in general and had undertaken more reading practice in particular. They also emphasized such things as silent reading, the reading of books and plays (literature emphasis). Finally, the more effective schools had more hours of instruction per week than the less effective schools.

Hong Kong (.22)

Indicator	ME	LE	Standardized Difference	SD
School size	999.5	422.8	1.68	343.62
Freq visit school library	3.0	1.2	1.56	1.15
Freq borrow bks from lib	3.5	2.9	1.53	0.39
Urban-rural	2.0	1.7	1.23	0.24
Reading in class	-0.0	-0.3	1.19	0.27
Class size	39.9	32.8	1.15	6.15
Teachers sex	1.9	1.4	1.07	0.45
Teacher-student ratio	31.5	22.2	1.02	9.08
Voluntary reading	0.1	-0.2	1.02	0.26
High demands and struct	0.4	0.3	0.71	0.21
Phonics teaching	0.3	0.1	0.53	0.33
Progr imp of read instruct	2.0	1.8	0.51	0.31
Encourage to read	-0.1	-0.3	0.50	0.46
Representing school	6.5	5.6	0.47	1.94
Rdg materials in school	0.2	0.0	0.45	0.35
Literature emphasis	-0.1	-0.3	0.40	0.36
Tchr readership (expos)	0.1	-0.0	0.39	0.39
Assmt of low order skills	-0.0	-0.2	0.38	0.35
Special tchr-student ratio	196.0	90.8	0.37	284.17
Instructional time (hours)	24.4	23.3	0.35	3.05

The more effective schools in Hong Kong had more students enrolled and larger class sizes. They provided, on average, one more hour of instruction per week than the less effective schools. The teachers in these schools were more often female, saw to it that their students visited the school library and borrowed books. They encouraged their students to read, had more reading in class, emphasized high demands and structure and phonics teaching and assessed lower-order skills. However, it should be noted that the correlation of the home background composite and achievement was only 0.07 in Hong Kong. This probably results in insufficient home effects being removed. It should be mentioned that the indicators of school size, class size, teacher-student ratio, and urban/rural are all related to the fact that the less effective schools are located in a few relatively isolated offshore islands and outlying rural areas. Chinese is not an alphabetic language and phonics teaching refers not to symbol-sound relationships but to the relationship between Chinese characters and their pronunciation and/or to the general rules governing these relationships.

Hungary (.17)

Indicator	ME	LE	Standardized Difference	SD
Reading in class	0.2	0.0	0.90	0.28
Literature emphasis	0.1	-0.1	0.75	0.29
Teacher-student ratio	16.7	14.6	0.69	3.13
Time spent rdg hw	3.1	3.0	0.66	0.26
Comprehension instr	0.6	0.4	0.64	0.26
Discuss ed objectives	1.8	1.0	0.59	0.77
Tchr readership (literature)	0.4	0.2	0.55	0.26
School size	687.5	554.0	0.53	250.48
Tchr readership (expos)	0.4	0.2	0.52	0.31
Hours/year school is open	750.8	712.1	0.47	82.65
Instructional time (hours)	20.5	19.5	0.46	2.10
General assmt emphasis	0.3	0.2	0.46	0.20
Time teaching this class	2.6	2.2	0.45	1.00
No serious problems	1.3	1.2	0.42	0.35
Urban-rural	1.9	1.7	0.42	0.48
Community resources	0.2	0.1	0.40	0.23
Tchr readership (prof)	0.4	0.3	0.40	0.23
Voluntary reading	0.3	0.2	0.40	0.28
Student newspaper	1.4	1.2	0.33	0.46
Total years teaching	18.3	15.1	0.31	10.46

The more effective schools tended to be in urban areas with more community resources. The student-teacher ratio was higher and the schools provided more instructional time than the less effective schools. The students spent more time on reading in class and more time on reading homework. The teachers in the more effective schools emphasized more the reading of books and plays, the understanding of what was read, and general assessment. The teachers themselves read more, had taught the same class longer, and had more years of teaching experience.

Iceland (.24)

Indicator	ME	LE	Standardized Difference	SD
Comprehension instr	-0.4	-0.6	0.83	0.29
Teachers sex	2.0	1.7	0.80	0.37
Sponsor rdg initiatives	1.5	1.2	0.76	0.45
General assmt emphasis	-0.1	-0.4	0.71	0.32
Assmt of low order skills	0.0	-0.3	0.67	0.40
Available books/student	2.6	1.6	0.64	1.67
Time teaching this class	3.6	2.8	0.61	1.24
Class size	21.6	19.0	0.55	4.73
Voluntary reading	0.0	-0.2	0.52	0.32
School size	440.2	319.6	0.50	240.55
Community resources	0.1	-0.1	0.47	0.44
Type of school	1.1	1.0	0.46	0.11
Informal assessment	0.1	-0.1	0.44	0.44
School resources	2.5	2.0	0.43	1.03
Urban-rural	2.0	1.9	0.42	0.24
Special tchr-student ratio	153.0	111.0	0.41	101.76
Freq borrow bks from lib	3.1	3.0	0.31	0.53

The more effective schools tended to have more school resources, higher school enrollments, larger class sizes, and teachers who emphasized the understanding of what was read, assessment, and also had taught the same class longer. However, it should be noted that the correlation between the home background composite and reading literacy achievement was only 0.07 and probably results in insufficient home effects being removed.

Indonesia (.30)

Indicator	ME	LE	Standardized Difference	SD
Urban-rural	1.6	1.0	1.44	0.42
Community resources	-0.2	-0.9	1.15	0.60
Phonics teaching	0.4	0.2	0.93	0.20
School resources	2.6	1.8	0.89	0.84
Available books/student	2.5	1.2	0.81	1.56
Total years teaching	14.4	8.4	0.80	7.39
Rdg materials in school	0.0	-0.2	0.76	0.29
Class size	39.5	28.2	0.71	16.10
Reading in class	0.0	-0.3	0.70	0.47
Teachers sex	1.6	1.2	0.70	0.50
School library bks/student	5.1	2.7	0.64	3.64
Frequency getting rdg hw	2.8	2.5	0.60	0.47
Student newspaper	1.8	1.6	0.58	0.45
Tchr readership (literature)	0.4	0.1	0.58	0.42
Literature emphasis	0.5	0.3	0.58	0.40
Special tchr-student ratio	36.4	0.0	0.58	62.85
Asked at home about rdg	2.5	2.1	0.58	0.54
Assmt of low order skills	0.3	0.2	0.57	0.20
Read aloud	-0.2	-0.4	0.56	0.41
Discuss ed objectives	3.4	2.3	0.55	1.89

The more effective schools were to be found in urban areas with more community resources. Such schools also had more reading materials and books in them. The teachers in the more effective schools tended to be female and with more years of teaching experience. They emphasized phonics teaching, had more reading in class, gave more reading homework and asked questions about the homework more frequently. They also practiced the assessment of lower order skills more frequently than did teachers in less effective schools.

Ireland (.14)

Indicator	ME	LE	Standardized Difference	SD
High demands and struct	0.1	-0.2	0.92	0.27
Special tchr-student ratio	354.6	156.1	0.90	220.33
Available books/student	2.7	1.9	0.76	1.01
Rdg materials in school	0.0	-0.2	0.74	0.24
Encourage to read	0.3	0.0	0.74	0.40
School library bks/student	4.4	2.4	0.72	2.81
Classroom library	2.0	1.9	0.71	0.14
School size	448.1	307.9	0.66	212.98
Tchr readership (prof)	-0.1	-0.4	0.60	0.40
No serious problems	1.3	1.1	0.57	0.35
Representing school	7.5	6.1	0.54	2.48
Assmt of low order skills	0.0	-0.1	0.53	0.34
Urban-rural	1.8	1.5	0.52	0.48
Teachers sex	1.8	1.6	0.51	0.47
Literature emphasis	-0.1	-0.2	0.41	0.43
Parental cooperation	3.5	3.3	0.40	0.70
General assmt emphasis	0.2	0.1	0.38	0.35
Principal engagement	0.0	-0.2	0.37	0.41

The more effective schools had higher enrollments, were more in urban areas and had more books and reading materials than the less effective schools. The teachers in the more effective schools corrected their students' reading aloud immediately, taught vocabulary words and used graded materials (high demand and structure) more than teachers in the less effective schools. The teachers also encouraged their students to read more, and assessed their students' learning more.

Italy (.29)

Indicator	ME	LE	Standardized Difference	SD
Reading in class	0.5	-0.3	1.30	0.57
Frequency getting rdg hw	3.5	3.0	0.93	0.58
Comprehension instr	0.6	0.3	0.84	0.38
General assmt emphasis	0.3	0.1	0.74	0.30
Insufficient class material	1.6	1.3	0.68	0.49
Qs in class about rdg hw	4.0	3.6	0.65	0.60
Time teaching this class	4.6	3.9	0.64	1.18
Teacher-student ratio	21.5	11.3	0.63	16.38
Total years teaching	24.7	19.2	0.61	9.15
Literature emphasis	-0.1	-0.3	0.61	0.35
Progr imp of read instruct	1.4	1.1	0.60	0.44
Assmt of low order skills	0.2	0.1	0.59	0.31
Phonics teaching	0.2	0.0	0.58	0.39
High demands and struct	0.4	0.2	0.57	0.30
Freq evaluate tchrs work	3.5	2.9	0.54	1.02
Tchr readership (expos)	0.1	-0.2	0.51	0.42
Individual instruction	1.4	1.2	0.42	0.50
Sponsor rdg initiatives	1.2	1.1	0.42	0.41
Informal assessment	0.3	0.2	0.39	0.28
Tchr readership (literature)	0.3	0.2	0.36	0.39

The more effective schools were characterized by the students reading more in class, receiving more reading homework and being asked more questions in class about the homework. The teachers in the more effective schools stressed reading for comprehension and the teaching of phonics, and assessed their students more frequently. The teachers had more years of teaching experience, had been teaching the same class slightly longer and read more themselves. The school principals in the effective schools perceived their schools as having insufficient materials and ensured that special reading programs were provided.

Netherlands (.13)

Indicator	ME	LE	Standardized Difference	SD
Class size	27.6	23.0	0.82	5.62
Rdg materials in school	-0.2	-0.2	0.79	0.05
Teacher-student ratio	24.1	21.1	0.72	4.19
General assmt emphasis	-0.2	-0.4	0.65	0.35
School library bks/student	4.9	2.6	0.64	3.63
Parental cooperation	3.5	3.1	0.62	0.64
Evaluation of staff	6.1	5.0	0.55	2.02
School size	208.3	173.7	0.52	67.10
Comprehension instr	-0.1	-0.3	0.48	0.32
Tchr readership (expos)	0.3	0.1	0.47	0.47
Classroom library	2.0	1.8	0.44	0.34
Freq borrow bks from lib	3.5	3.3	0.42	0.44
Read aloud	0.1	0.0	0.36	0.46
Type of school	1.7	1.5	0.31	0.49
Activities/pastoral care	4.7	4.1	0.31	2.05
Voluntary reading	-0.2	-0.3	0.31	0.30

The more effective schools had more reading materials in school, more school library books per student, and more classroom libraries than did the less effective schools. The more effective schools had higher enrollments than the less effective, larger class sizes and higher student-teacher ratios. The teachers in the more effective schools read more expository material themselves and stressed the understanding of what was read, had more emphasis on assessment, and had more reading aloud in class. The schools had more parental cooperation and the school principal evaluated the staff more and undertook more pastoral care activities. There were more private schools among the more than the less effective schools.

New Zealand (.16)

Indicator	ME	LE	Standardized Difference	SD
Parental cooperation	4.2	3.1	1.23	0.93
No serious problems	1.5	1.1	0.90	0.45
School library bks/student	19.0	11.4	0.83	9.14
Freq borrow bks from lib	3.8	3.4	0.82	0.50
Time spent rdg hw	3.0	2.8	0.75	0.35
Freq visit school library	3.5	3.1	0.67	0.53
Practice reading (hours)	5.9	4.4	0.66	2.25
Voluntary reading	0.0	-0.2	0.65	0.34
Rdg materials in school	0.3	0.1	0.65	0.31
Student newspaper	1.3	1.0	0.61	0.39
Teacher-student ratio	25.9	24.0	0.54	3.51
Evaluation of staff	5.4	4.4	0.53	1.86
Available books/student	2.5	1.9	0.52	1.03
Type of school	1.2	1.1	0.51	0.20
Time teaching this class	2.1	1.9	0.37	0.54
Principal engagement	0.1	0.0	0.34	0.34
Frequency getting rdg hw	2.7	2.5	0.34	0.77
Classroom library	2.0	2.0	0.33	0.15
Insufficient class material	1.3	1.2	0.31	0.43

The more effective schools had more parental cooperation, more books and had students who borrowed books more frequently. The teachers in such schools gave more reading homework and the students did, in fact, do more homework. They had more practice reading in class. The school principals helped their staff members more and had promoted a school or student magazine or newspaper in their schools.

Norway (.11)

Indicator	ME	LE	Standardized Difference	SD
Comprehension instr	0.1	-0.2	0.88	0.34
Phonics teaching	0.0	-0.3	0.84	0.38
Total years teaching	20.0	14.4	0.70	7.99
Assmt of low order skills	0.0	-0.3	0.69	0.42
Discuss ed objectives	2.7	1.7	0.66	1.54
High demands and struct	-0.1	-0.3	0.62	0.31
General assmt emphasis	0.2	0.0	0.58	0.34
Parental cooperation	3.4	3.0	0.51	0.73
Practice reading (hours)	1.9	1.5	0.50	0.81
Reading in class	0.0	-0.2	0.43	0.54
Individual instruction	1.9	1.8	0.42	0.27
Teachers sex	2.0	1.8	0.41	0.38
Insufficient class material	1.5	1.3	0.38	0.50
Qs in class about rdg hw	3.6	3.5	0.33	0.40
Activities/pastoral care	3.1	2.6	0.33	1.48
Community resources	0.1	0.1	0.32	0.28
Tchr readership (prof)	0.2	0.1	0.31	0.31

It was the teachers who were most associated with differences between the more and less effective schools. The teachers in the more effective schools stressed reading for comprehension, the teaching of phonics, had high demands, had more practice reading, asked their students about their reading homework more, had more reading in class and assessed their students more frequently.

Portugal (.25)

Indicator	ME	LE	Standardized Difference	SD
Type of school	1.3	1.0	0.91	0.27
Freq evaluate tchrs work	2.4	1.6	0.73	1.14
Instructional time (hours)	23.2	22.4	0.66	1.13
Urban-rural	1.5	1.2	0.64	0.47
Community resources	-0.3	-0.7	0.62	0.60
Special tchr-student ratio	123.2	63.1	0.57	105.70
Sponsor rdg initiatives	1.6	1.3	0.57	0.49
St read to in other lang	1.2	1.2	0.55	0.16
Assmt of low order skills	0.4	0.3	0.51	0.19
Voluntary reading	0.3	0.0	0.50	0.46
Teacher-student ratio	18.3	16.5	0.48	3.74
School size	223.5	141.6	0.47	172.48
Student newspaper	1.5	1.3	0.47	0.48
Rdg materials in school	-0.2	-0.3	0.46	0.07
Progr imp of read instruct	1.2	1.1	0.45	0.36
Class size	22.7	20.5	0.43	4.95
No serious problems	1.1	1.0	0.35	0.29
Hours/year school is open	969.7	908.0	0.30	203.00

The more effective schools included more private schools and tended to be in urban areas with bookshops and public libraries nearby. They also had higher enrollments and larger class sizes, more reading materials and offered more hours of instruction per year. The schools also sponsored more reading initiatives and had a school or student newspaper or magazine. The school principals evaluated their teachers' work more.

Singapore (.17)

Indicator	ME	LE	Standardized Difference	SD
Teacher-student ratio	28.4	23.0	1.16	4.70
Class size	39.5	34.4	0.99	5.21
Parental cooperation	4.0	3.3	0.84	0.78
School size	1370.4	1096.5	0.56	489.50
Freq evaluate tchrs work	3.7	3.5	0.49	0.51
Freq visit school library	2.9	2.5	0.45	0.89
Evaluation of staff	4.9	4.3	0.40	1.59
Progr imp of read instruct	1.8	1.6	0.33	0.45
Freq borrow bks from lib	3.6	3.5	0.31	0.43
Rdg materials in school	0.6	0.40	0.31	0.58

Only ten indicators had difference values of more than 0.30 of a standard deviation.

The more effective schools tended to have higher school enrollments and larger class sizes, more parental cooperation, more reading materials and their students visiting the school library more and, in general, borrowing more books. The school principals tended to evaluate their staff members' work more and have initiated a program for the improvement of reading instruction.

Slovenia (.09)

Indicator	ME	LE	Standardized Difference	SD
Representing school	7.7	6.4	0.77	1.74
Urban-rural	1.8	1.5	0.73	0.48
Parental cooperation	3.2	3.0	0.57	0.44
Community resources	0.0	-0.2	0.57	0.35
Classroom library	1.7	1.5	0.43	0.46
Tchr readership (expos)	0.5	0.4	0.42	0.27
Sponsor rdg initiatives	2.0	2.0	0.42	0.12
Activities/pastoral care	3.8	3.1	0.41	1.58
Insufficient class material	1.5	1.3	0.40	0.47
Tchr readership (literature)	0.17	0.0	0.39	0.36
Evaluation of staff	5.3	4.6	0.39	1.60
Class size	25.4	23.9	0.37	3.91
No serious problems	1.3	1.2	0.31	0.45

More effective schools tended to be in urban areas with public libraries and bookstores nearby. These schools had more classroom libraries than did the ineffective schools. The school principals in more effective schools represented their school more, evaluated their staff more and had initiated reading programs more than principals in less effective schools.

Spain (.16)

Indicator	ME	LE	Standardized Difference	SD
Parental cooperation	3.7	2.4	1.62	0.81
Encourage to read	0.3	-0.0	0.98	0.34
No serious problems	1.5	1.1	0.98	0.42
Progr imp of read instruct	1.7	1.3	0.94	0.50
School resources	2.9	2.2	0.82	0.94
Freq evaluate tchrs work	3.6	2.7	0.77	1.10
School size	802.5	495.3	0.76	404.97
Individual instruction	1.4	1.0	0.74	0.50
Rdg materials in school	0.1	-0.1	0.74	0.22
Type of school	1.4	1.0	0.74	0.48
Class size	28.9	24.1	0.74	6.58
Comprehension instr	0.0	-0.3	0.68	0.38
Tchr readership (literature)	-0.1	-0.4	0.60	0.44
Classroom library	2.0	1.8	0.59	0.34
Community resources	-0.1	-0.3	0.58	0.41
Informal assessment	0.1	-0.2	0.57	0.41
Sponsor rdg initiatives	1.7	1.4	0.57	0.50
Student newspaper	1.4	1.2	0.56	0.48
Teacher-student ratio	23.7	20.2	0.49	7.12
Tchr readership (prof)	0.18	0.0	0.48	0.37

The more effective schools above all had school principals who perceived that they had more parental cooperation and no serious problems in the school. The principals had initiated various special programs for reading, a school or student newspaper or magazine and evaluated their teachers' pedagogical work. The more effective schools had more school resources, reading materials and class libraries, but also had higher enrollments than did the less effective schools. The teachers encouraged their students to read more, stressed understanding of what was read, and assessed their students more frequently. The teachers themselves read more.

Sweden (.08)

Indicator	ME	LE	Standardized Difference	SD
Parental cooperation	3.2	2.6	1.12	0.54
Teacher-student ratio	13.6	11.2	0.80	3.04
High demands and struct	-0.3	-0.5	0.76	0.32
Comprehension instr	-0.1	-0.3	0.73	0.33
Literature emphasis	0.1	-0.1	0.66	0.34
Voluntary reading	0.2	-0.1	0.65	0.36
Special tchr-student ratio	111.5	86.6	0.59	42.10
Total years teaching	22.0	17.0	0.56	8.97
Teachers sex	2.0	1.9	0.55	0.18
Community resources	0.2	0.1	0.54	0.29
Freq borrow bks from lib	3.6	3.3	0.50	0.50
Reading in class	-0.1	-0.4	0.43	0.58
Progr imp of read instruct	1.7	1.5	0.38	0.49
Individual instruction	1.3	1.1	0.36	0.38
General assmt emphasis	-0.3	-0.4	0.33	0.43
Discuss ed objectives	2.0	1.6	0.33	1.29
Insufficient class material	1.2	1.1	0.32	0.34
Representing school	7.1	6.5	0.32	1.63
No serious problems	1.5	1.3	0.31	0.48
Freq visit school library	3.0	2.8	0.31	0.68

The more effective schools received more parental cooperation than less effective schools and also had more special programs for reading. Above all they had teachers who stressed more reading for understanding, high demands and structure, and the reading of books and plays more than teachers in the less effective schools. These teachers also had more years of teaching experience.

Switzerland (.20)

Indicator	ME	LE	Standardized Difference	SD
Class size	20.1	17.7	0.69	3.53
Progr imp of read instruct	1.2	1.1	0.51	0.29
Tchr readership (literature)	0.0	-0.2	0.49	0.36
Special tchr-student ratio	117.7	66.7	0.48	106.23
Parental cooperation	3.1	2.8	0.48	0.54
Voluntary reading	-0.2	-0.3	0.45	0.37
Time teaching this class	3.1	2.7	0.43	1.04
Sponsor rdg initiatives	1.2	1.1	0.43	0.37
Informal assessment	-0.2	-0.3	0.40	0.37
Freq borrow bks from lib	3.1	2.9	0.35	0.62
Comprehension instr	-0.1	-0.2	0.34	0.30

Switzerland has no school principals at the primary school level. The more effective classes were larger and had teachers who had taught the same class longer. The teachers in the more effective classes read more literature themselves, informally assessed their students more frequently, and stressed reading for understanding. The teachers of the more effective classes also perceived that they had more parental cooperation than did the teachers in the less effective schools.

Trinidad and Tobago (.27)

Indicator	ME	LE	Standardized Difference	SD
Available books/student	5.0	0.5	2.22	1.98
Voluntary reading	0.2	-0.4	1.18	0.51
Type of school	1.4	1.0	1.09	0.32
Freq borrow bks from lib	2.8	1.9	1.09	0.85
Reading in class	0.5	0.0	0.98	0.48
Freq rdg aloud at home	3.2	2.3	0.89	0.99
Parental cooperation	3.6	2.8	0.84	0.95
Urban-rural	1.8	1.4	0.81	0.49
Total years teaching	19.5	12.3	0.74	9.70
No serious problems	1.2	1.0	0.72	0.28
General assmt emphasis	0.3	0.1	0.69	0.30
Discuss ed objectives	3.0	2.1	0.64	1.49
Time teaching this class	2.4	1.9	0.62	0.75
Home literacy interaction	0.7	0.4	0.58	0.57
Time spent rdg hw	3.0	2.8	0.55	0.36
School library bks/student	2.1	1.1	0.54	1.81
Asked at home about rdg	2.9	2.7	0.52	0.48
Assmt of low order skills	0.4	0.3	0.49	0.19
Special tchr-student ratio	61.2	18.3	0.45	96.02
School resources	1.5	1.2	0.42	0.89

The more effective schools tended to be in urban areas and private. They had more books per student and more parental cooperation. The students in these schools read more both at school and at home (including reading aloud), had more parental help (home literacy interaction) and spent more time on reading homework. The teachers in the more effective schools had more years of teaching experience, had taught the same class longer and assessed their students more frequently.

The United States (.18)

Indicator	ME	LE	Standardized Difference	SD
Total years teaching	17.5	8.8	1.00	8.73
Parental cooperation	3.9	3.1	0.85	0.94
Staff meetings	2.2	1.7	0.81	0.60
Available books/student	3.8	2.5	0.79	1.62
Freq borrow bks from lib	3.5	3.2	0.58	0.44
School library bks/student	17.8	11.6	0.56	11.06
Voluntary reading	-0.1	-0.2	0.53	0.32
Instructional time (hours)	28.8	27.3	0.49	2.95
Hours/year school is open	1030.7	981.3	0.45	110.61
Type of school	1.2	1.1	0.43	0.35
Tchr readership (prof)	0.2	0.1	0.40	0.37
Multigrade class	1.1	1.0	0.37	0.14
No serious problems	1.7	1.6	0.36	0.48
Freq evaluate tchrs work	3.6	3.3	0.34	0.63
Reading in class	0.3	0.1	0.32	0.49
Teachers sex	1.9	1.8	0.29	0.34
School resources	2.4	2.1	0.25	1.02
Tchr readership (literature)	0.3	0.2	0.20	0.39
Student newspaper	1.5	1.4	0.20	0.50
Community resources	0.2	0.1	0.18	0.20

The more effective schools had more books per student, provided more hours of instruction, held staff meetings more frequently, had school principals who evaluated their teachers' work more, and had teachers who had more years of teaching experience. There were more private schools among the more effective schools. Above all, the more effective schools perceived themselves as having more parental cooperation.

Venezuela (.28)

Indicator	ME	LE	Standardized Difference	SD
Classroom library	1.6	1.1	1.28	0.46
Type of school	1.4	1.0	1.01	0.38
School library bks/student	2.7	1.0	1.00	1.69
Asked at home about rdg	3.1	2.8	0.88	0.40
Evaluation of staff	4.4	2.8	0.77	2.13
Available books/student	0.9	0.3	0.74	0.84
Teachers sex	1.9	1.7	0.60	0.35
Tchr readership (literature)	0.2	-0.1	0.59	0.52
Teacher-student ratio	45.2	26.3	0.58	32.65
Assmt of low order skills	0.3	0.1	0.51	0.34
Informal assessment	0.2	0.0	0.42	0.51
Voluntary reading	0.3	0.1	0.41	0.52
High demands and struct	0.4	0.3	0.41	0.30
School resources	1.6	1.2	0.39	0.97
Encourage to read	0.2	0.0	0.38	0.41
Urban-rural	1.9	1.8	0.35	0.35
St read to in other lang	1.3	1.3	0.31	0.18

The more effective schools had more classroom libraries and more books and school resources in general. In these schools there were more female teachers who read more literature themselves and assessed their students more frequently. They had more high demands and structure and encouraged their students to read more. The students were asked more frequently about their reading at home than were the students in less effective schools. There were more private schools among the more effective schools than among the less effective schools.

This booklet presents the results of an exploratory study of educational indicators that differentiate more effective from less effective primary schools. It examines the community context of the school; school management; school size, type, and staffing levels; school reading resources; school special reading programs and initiatives; classroom libraries and materials; kinds of reading teachers; teacher activities and teaching methods; and out-of-school activities. This book should be of great interest to educational policymakers and planners.

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